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ANATOMY AND PHYSIOLOGY.

INTRODUCTORY LECTURES

DELIVERED BY

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LECTURE III.

THOSE gentlemen who have already attended on this course of lectures will find that I have omitted one part, namely, a reference to the movements of the body. This subject can be brought forward in a more interesting manner when we come to consider the muscles. The main divisions will stand precisely the same as in previous lectures, for there is little occasion to change from year to year the general arrangement; but you will find, as I advance, that there is a considerable alteration in the details. Physiology and minute anatomy—anatomy of texture—are progressing with great rapidity. There are scarcely any sciences, except chemistry and electricity, that are making such rapid advances. This necessarily involves certain changes, partly of addition, augmentation, increase, and partly the reverse; because every addition to our knowledge enables us to dispense with something which we discussed before. As knowledge advances, facts and doctrines become more firmly established, and do not require the same amount of discussion, argument, and so forth, as when our information concerning them was less accurate and defined.

In pursuance of the plan which I have laid down, I commence to-day with the distinctions of organised bodies, of animals, and plants. The objects which exist in nature, so far as they are known to us, have long been reduced into three divisions, called the *kingdoms of nature*. Animals, vegetables, and minerals, respectively form the animal, the vegetable, and the mineral kingdoms.

It is necessary that you should know how to distinguish between these three kingdoms of nature. It is quite true that for ordinary purposes such distinctions need not be particularly stated. No one would run the risk of confounding a tree with a stone. The distinction of plants and animals of a higher kind is so clearly marked that in common life there is no necessity for alluding to the distinction. But in entering on the study of this and similar subjects, we require to consider those characteristics common to all animals, vegetables, minerals, and those which in all cases serve to distinguish them. In cases of doubt we must endeavour to find out these characters.

But while a general distinction into animals, plants, and minerals has long subsisted, there is another distinction which first claims our attention, that of living and lifeless bodies. By living bodies, I mean such as are the products of life, or which have enjoyed life at some period of their existence; lifeless or inanimate bodies are those which do not enjoy life, and never have. Animals and vegetables constitute the division of living bodies; minerals are lifeless, or dead bodies; the former are more frequently termed *organised* bodies, because they have a peculiar structure, called organised structure, and this is connected with life. The two are combined together,—the phenomena of life and the existence of organised structure. On the other hand, minerals are called inorganic bodies; plants and animals are living bodies; a stone is a dead one. It is well to impress upon you these great, fundamental divisions, even at the risk of being a little tedious in repetition. Living and organised bodies are synonymous terms, and so are inorganic or dead bodies.

Inorganic bodies comprehend by far the greater mass of natural objects,—the mountains, rocks, a great part of the crust of the earth, the ocean, and so on; but the living bodies are by far the most diversified; they exhibit the most varied phenomena; they constitute the most beautiful objects of investigation, and not only so, they exist to a much greater extent than at first sight might appear. Accurate examination has proved that a considerable portion of the crust of the earth, and many of those matters which formerly we were inclined to regard merely as mineral substances, are the products of

animal or vegetable life. Think of the great coral reefs, which contain millions of creatures called *polypi*, working at the bottom of the sea. These submarine structures are not mineral substances, but the products of animal life. So, again, in the great mass of rocks there are shells, conglomerated together, constituting whole strata. In still more recent times, it has been found that many animalculæ, which only become visible by the aid of a microscope, leave traces of their existence. Many of these animalculæ are composed of hard shells—the hardest known except the diamond—I mean, the flint. By the inquiries of Ehrenberg and his followers, it has been ascertained that those minute shells, the remains of animalculæ, form immense strata of great extent, and many feet in depth, in various parts of the world. Again, I may remark, as those who have an opportunity of studying comparative anatomy and zoology will be informed more effectively than I can communicate it, that many of those substances belonging to the hardest bodies in nature—the flints which abound in the chalk—are ascertained to be petrified sponges. Upon the surface of these, apparently masses of flint, we can often trace orifices and pores, such as are found on the surface of sponge. This shows that organised bodies form a large branch of study, both in their extent and their diversity.

The remainder of this lecture I shall devote to the consideration, in the first place, of the distinctions that can be ascertained to exist between inorganic or mineral bodies on the one hand, and organised or living bodies on the other; we shall consider how the divisions of organised bodies have again to be subdivided into animals and plants, or by what means one class of organised bodies may be distinguished from other classes.

First, let us consider the distinction between inorganic or dead bodies, and organised or living bodies; between minerals on the one hand, and plants and animals on the other.

The first great character which distinguishes them is, the process of nutrition, which belongs to plants and animals. By this process they have the power of taking into the interior of their own bodies, and converting into their own substance, a portion of extraneous matter, which, having served its purpose, and become no longer serviceable, is, in virtue of the same process, eliminated, and discharged. In the case of plants, nourishment is taken up from the soil by the roots, and from the atmosphere by the leaves; this nourishing matter is mixed with the sap, conveyed throughout every part of the plant, and converted into wood, the bark, the leaves, the flowers, the fruit; in short, into every part of the texture of the plant; and having served its purposes there, and constituted a part of these different textures, the same material is again removed from the body, eliminated from the system by the processes of secretion and exhalation, and returns to the soil. In this way there is a constant change going on—a constant absorption of new materials, and an elimination of the old. This, however, takes place to a greater extent in the animal body: an animal takes into his stomach a quantity of alimentary matter, a portion of which is absorbed into the system, and converted into his own substance: blood, bone, muscle, sinew, nerve, and so on. This is termed the process of *assimilation*, and by it the substance taken into the system is made identical with the proper substance of the plant or animal. When they have thus been assimilated, these matters are, in due time, again removed, and thrown out of the system by the processes of exhalation and secretion. In this way living bodies are subject to a constant change; they do not remain permanently in one state; they seem to borrow from surrounding nature a portion of its materials, which they retain for a time, and then yield it back again. No such change takes place in a mineral. A mineral body, after it is once formed, may remain in that state as long as it is consistent with the ends of Providence, that the present condition of our globe should continue. It may be exposed to the action of water—it may be washed away, but these changes are accidental; they are rather of a destructive than of a constructive nature; they tend to destroy objects, not to repair them. This is the first leading distinction between living and dead bodies; living or organised bodies are subject to perpetual change from nutrition; inorganic or dead bodies do not necessarily undergo change.

Here I cannot but advert to one or two apparent exceptions, which I do not pretend fully to explain. The seeds of plants will sometimes continue for a long season unchanged, and yet retain life, provided they are not exposed to the external influence of light, moisture, air, &c. Long buried deep in the earth they remain unchanged, but exposed to these influences they will grow and live. No doubt a seed is a part of an organised or living body, and here is a case where an organised body remains unchanged. I need scarcely remind you of an example furnished by Dr. Lindley. In an ancient sepulchre in the west of England, seeds were found which were proved to belong to the wild raspberry; they were discovered in the belly of the skeleton, and had apparently been swallowed by the person when alive; they had remained for many centuries, but notwithstanding this, when sown and brought to life again, they produced the wild raspberry tree, which grew and flourished. In this case the seeds had been lying dormant. I shall not enter into the subtle question of how far a seed is to be considered an organised or living body; but the fact referred to scarcely constitutes an exception to the rule laid down, at least it is only a modification

of it, because as soon as seeds are exposed to the usual external influences necessary to effect a change, they must either grow or decay, and die. The only modification required would be this: that living bodies, exposed to the influence of external agents, heat, light, air, moisture, necessarily undergo the change of nutrition. Another case is the well-known example of mosses, and other simple plants, which having been kept by the herbalist or the botanist for nearly a century in a dry state, have, on being moistened, been known to flourish. Here life was dormant, but, on being exposed to the usual influences, it was necessary they should live and grow, or die and decay; they could not remain unchanged. This is not the case with mineral bodies, and hence it constitutes one great distinction between them.

Connected with this distinction—in fact, forming a part of it—is another circumstance, which I can best explain by meeting an objection. It might be alleged, that minerals do grow; that if you drop a crystal into a solution of salt, it will grow larger by the deposition of a new mass. But this is a very different thing from the growth of a plant or an animal by the process of nutrition. In a plant or an animal, the extraneous matter is conducted into the interior of its own body, and then eliminated from it. But in a mineral, on the other hand, there is a simple deposition on the surface; it is not necessarily a part of the surface. A crystal will remain a crystal, without growing larger; but a plant, if exposed to the influences I have stated, must undergo this change. Hence, some have made a distinction, connected with the first I have mentioned to you, or an addition to it, and have said, that when minerals do increase, it is merely by deposition on the surface, or what is called *accretion*—new layers on the old; whereas, when plants and animals increase, it is by *intus-susception*, or taking nourishment into the interior, where it is converted into the tissue of the plant or animal, and the fæcal matter is removed from it. But I would consider this as a part of the first character, the process of nutrition. You may first consider that, and then the subordinate modifications.

I have next to claim your attention to another great distinction between organised and inorganised bodies. In order to enable plants and animals to carry on the process of accretion—this addition of new matter and the removal of old—a certain kind of structure is necessary. This is called *organised structure*, which, in its most general condition, consists of a certain admixture of solids and fluids. This heterogeneous structure of solid and fluid parts constitutes organised structure, and is peculiar to organised beings. The necessity of this is quite apparent; for the matters conveyed into the body, before they can be converted into its substance, must first be liquefied, and there must be some liquid matter by which this is effected. There must constantly be fluid present in the animal or plant; and solids are requisite, in order to give form to the body and to contain the liquids. Thus, for the most part, solids, in their simplest condition, form cells or tubes—elongated cells—which contain the fluids. In plants the structure is cellular; in animals there is often an areolar structure—a sort of network of fibres formed of solid materials, with the liquid contained in the interstices. It is through the medium of the solids that the liquids are collected.

Now this is not the case with minerals; minerals do not necessarily possess heterogeneous structure. It might be said, that in a piece of granite there are several kinds of structure mixed up—quartz, mica, felspar—and this is heterogeneous, it is true, but it is not necessary to structure. It may be homogeneous, the same material throughout. Again, some of you may, perhaps, be aware, that of late years much attention has been directed to a curious fact, viz., that many crystals contain fluids in their cavities. These fluids are imprisoned in the crystals; and it might be said that here is a mixture of solids and fluids. But you must remember that the solids can exist without the fluids; that they have no reciprocal action on each other. The fluid is not carried about from one part to another; it is a mere accidental circumstance, not essential; but in animals and plants the fluid is an essential part of their constitution. This heterogeneous structure of solids and fluids, which is named organic structure, is a second-rate character of animals and plants—organised bodies. I may just mention, that the nature of the tissue of animals and plants must suppose more or less sensibility. Organised structure must possess a certain degree of flexibility, to enable the solids to accommodate themselves to the quantity of fluids, to promote the required motion, and so on.

But, in the third place, there is a great distinction between organised and inorganic bodies, as to the mode of their origin. By bringing the elements of minerals together, we can often produce them. By adding carbonic acid to burnt lime, we can form limestone; and minerals of a more complex kind can be produced by similar processes. But no one can produce animals or plants by simply bringing the elements of them together; they derive their origin from previously-existing parents. It is true, that a considerable number of physiologists admit the possibility of what is called *spontaneous generation*—that is, that animals of the simplest kind may sometimes originate in circumstances in which no parent can be present, as in animals arising in infusions and so on, and where it has been supposed that there were neither eggs nor germs. I shall not now enter into the consideration of this doctrine, it is

not the proper place for it; I shall merely remark, that the more the inquiries of physiologists have been extended, the less room there seems to be for admitting it. The sphere of it becomes more and more narrowed; for, every day, animals which were supposed to originate from spontaneous generation, are proved to arise from a different source. We may safely say, that in all cases in which the origin of plants or animals is capable of being traced, they are referrible to parents of the same kind.

Another character is,—the duration of organised bodies is limited; it is not indefinite. Minerals may last as long as the world shall exist; but animals and plants, however short or however long a time they live, have a tolerably well-defined period of existence. We know of trees which seem to have lasted for many centuries—some say thousands of years; we know of animals which scarcely live a day; but still there is a period during which they live, and afterwards they are subject to dissolution; they die, and are subject to decay. After death a new process is set up, that of decomposition and putrefaction; during life this is prevented. Some persons say that it is the property of life to resist decomposition; but it may be thus explained: in virtue of the constant changes which take place, there is no room for decomposition; new materials are retained for a time in the system, and then eliminated from it. But after death, the moment the process of nutrition ceases, decomposition is set up, provided they are exposed to the usual external agents. If you exclude air and moisture, you may prevent putrefaction; but if the body be exposed to them, it is sure to occur.

The last distinction of organised and living bodies is, that they have the power of reproduction. This might be inferred from what I have already stated. They have the power of giving rise to new beings like themselves, in order to keep up the race or the species.

These are the five leading distinctions which must be kept in mind; others less general in their application have been introduced, which I would merely mention in passing. It has been allowed, and properly so, that there is a certain limit to the size of organised bodies; but this is not the case with minerals. There may be a mass of limestone not larger than an orange, or there may be a mountain of it, but it is still limestone. But the largest trees, the largest animals, the monsters of the deep, are not of indefinite magnitude, they do not reach above a certain size. Again, the form of organised bodies is defined. There is a great difference between the form of one plant and another—between the form of one animal and another; but still there is a certain form by which we can distinguish them, and to which they are restricted, far more definite than what occurs in masses of mineral. Minerals often assume the regular form of crystals, but this is not essential to them; the same minerals may present themselves in an amorphous condition. I do not give this as one of the leading characters, because some animals are extremely various in their form. I mention it, because it is generally stated; but I regard it as a very subordinate character of organised bodies.

Again, it is said that the surfaces of organised bodies are usually more rounded than those of most inorganic bodies. The latter are bounded by plain surfaces, flat surfaces, sharp angles, and points; but animals and plants are more or less rounded.

Now the phenomena presented by living animals and plants, of nutrition, and so on, give the most general idea of what is called life. The term life, however, is applied in two senses, to which I shall merely allude. It has been employed, first, to designate the assemblage of all those appearances or actions or phenomena presented by living animals or plants; and, secondly, some hidden cause which produces them. In one sense, the term is synonymous with living state. We say this animal is living, and those various processes which take place in it together constitute what is called life: but in another sense it is said, that life is the cause of these actions. I shall not, however, enter further into that point at present.

But I must call your attention to the distinction between animals and vegetables; and here the same remark applies, that I made when speaking of the distinction between organic and inorganic bodies. We are not likely to confound a man with a tree; but when we come to the bottom of the scale, to the simplest form of animals and plants, difficulties present themselves. For instance, To which class does sponge belong? Some consider it a plant; whereas others, with great justice, consider it an animal product. This implies a difference of opinion, and a difficulty in distinguishing to which class it belongs. There are some naturalists who almost admit between the animal and vegetable kingdom a disputed territory, over which neither the one nor the other have been able to establish their claim. There are many objects which engage much attention, in order to find out to which class they should be assigned.

Now the first distinction which presents itself between animals and plants is, that animals are endowed with consciousness. They enjoy sensation and consciousness; they possess certain feelings of pleasure, pain, gratification, and so on, and the powers of voluntary motion; which is not the case with plants. This broad statement, however, requires some modification, some qualification. There cannot be the slightest doubt that the higher animals enjoy sensation and voluntary motion; but there are some animals which approach to that disputed terri-

tory to which I have just alluded; and it has been questioned whether there is any evidence of their possessing sensation and volition. Upon the surface of an oyster-shell there are a multitude of small plant-like objects attached, which, at first sight, you would really take for plants, but which are, in fact, animals: for when viewed with a glass—and it does not require a very high power—in salt water, there is a branched stem; and at the extremity of each branch there are small bell-shaped vessels, in each of which there is an animal. These belong to the campanularia, or bell-shaped polype. Here there is no obvious locomotion, the animal is fixed on a stem like a flower, and is attached to the shell. It may be doubted whether this animal has sensation or voluntary motion, but I think there is sufficient evidence to prove it: for although it cannot quit that part of the ocean in which it is doomed to live, yet it can draw itself out and push itself into its cell; and it seems to do this by its own will or caprice, for it often lies quite shrunk up in its cell; but when it is disposed to take food, or when the animalculæ on which it lives happen to be in its vicinity, it opens wide the mouth of the whole body shaped like a bell, stretches out its tentaculæ, and then contracting them, seizes its prey. This is something very different from what we ever see in plants; there is an indication of a feeling of want, an appetite, a desire, and then the volition of the will to supply this want by means of voluntary motion; and this is done not at regular intervals, but just when the animal pleases. It will also shrink from danger, and retract into its cell. Hence there is an indication of consciousness of the presence of external objects, of feeling, of desire, of a will, and of voluntary motion to effect it. This is not the case with plants, as I shall have occasion to explain more fully to-morrow.

COURSE OF LECTURES

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(Second Division.)

LECTURE III.

Diseases of the Iris—(continued).

THE pupil is sometimes exceedingly contracted and incapable of dilatation, without inflammation of the iris having previously existed, and, therefore, without accompanying adhesion to the capsule, or irregularity in the shape of the aperture. This condition is named *myosis*.

In some instances this affection appears to arise from spasm of the sphincter fibres, whilst in others it is, probably, owing to paralysis of the radiating fibres. Of the spasmodic variety, I only remember to have met with a solitary instance. The case is briefly as follows:—A girl, eight years of age, presented herself with the eyelids of the left side spasmodically closed, and a constant twitching motion of the fibres of the orbicularis. On separating the lids, the sphincter fibres of the iris were apparently in a similarly-excited state, the pupil contracting and slightly dilating with considerable rapidity, independently of variations of light. There was, likewise, a corresponding action of the orbicularis oris muscle of the same side, the mouth being drawn to the affected side. Her own account was, that the vision of this eye was quite gone. By the application of leeches to the temple, and the internal administration of calomel and purgatives, the disease was speedily subdued, and vision restored.

I have more frequently met with cases of myosis in which there was reason to believe that the affection owed its origin to paralysis of the radiated fibres, because, in some, the individuals exhibited symptoms of paralysis of other parts. This condition of the pupil ought to be regarded rather as a symptom of some affection of the brain, or of the nerves which regulate the motions of the iris, than as a disease of the texture of the iris itself. In some cases, it probably arises from irritation of the ciliary nerves, which are often implicated in the deep-seated affections of the eye, such as those of the choroid and retina. Hence it is a frequent accompaniment of amaurosis, particularly of its early stages. The treatment must be regulated according to the presumed origin of the malady; probably a mild mercurial course, with occasional purgatives, combined with counter-irritants, offers the best chances of success.

The pupil is extremely contracted during sleep, as any one may perceive by carefully raising the superior eyelid of a sleeping infant. It is important to bear this in mind, because, if you were examining an infant in this condition, who might have some slight ailment, it is possible you might be led to regard this as a symptom of disease, when, in reality, it is only an ordinary and natural phenomenon. Contracted pupil is a common accompaniment, likewise, of inflammatory affections of the brain, cases of apoplexy, and is observed after poisonous doses of opium, and other narcotic substances; and it is usually attended with a corresponding condition of the eyelids.

In some instances the pupil becomes exceedingly contracted, without there being any evidence of disease present. This is especially apt to be the case with watchmakers,

engravers, and others who are constantly occupied with the examination of very minute or shining objects. In these individuals the pupil becomes habitually contracted, but still it always dilates to a certain extent, when under the influence of diminished light. Such persons are usually near-sighted, and are not able to see so well as others in the dusk, or in a feeble light. It is certain, however, that the pupil, in different individuals, is of exceedingly different dimensions, and in many, it is extremely small, without being attended by any defect of sight.

Myosis from Non-absorption of the Pupillary Membrane.—A contracted state of the pupil is sometimes met with as congenital. The iris is imperforate in the early stage of fœtal life; the serous membrane passing over its entire surface, and that of the pupillary space, without interruption. The portion which stretches across the pupil is usually absorbed about the sixth or seventh month, although some writers state that they have frequently observed it at the period of birth. Sometimes, indeed, it is stated to have continued as a permanent barrier, although this is an extremely rare occurrence, so much so that I have never witnessed an instance. "When the pupillary membrane (says Mr. Wardrop) is not absorbed before birth, it appears in the form of an opaque web, which is easily distinguished from cataract by being vascular, by the size of the pupil being unalterable, and being on the same plane with the iris." The treatment of such a case must be the same as for congenital cataract; indeed, it would be impracticable to rupture the pupillary membrane, without, at the same time, injuring the capsule of the lens.

Mydriasis.—As well as being exceedingly contracted, the pupil is often preternaturally dilated. This condition is called *mydriasis*. A moderately-dilated pupil frequently exists, particularly in children and delicate persons, without any inconvenience to vision resulting. Indeed, like the opposite, it may be considered as the natural condition in many persons; the size of the pupil, which is exceedingly variable, being probably determined in each individual by the peculiar conformation of the eyes. In most persons, however, it is capable of being either considerably contracted, or dilated, according as the light is more or less intense. When the pupil is much dilated, and a strong light directed upon the eye produces no sensible contraction, then this is the condition to which the term mydriasis is applied. There can be little doubt that this is owing to a paralytic state of the orbicular fibres, which has been induced by some morbid action of the nerves proper to the iris. It is sometimes the result of blows, and other injuries inflicted upon the eye. Mydriasis is frequently met with, likewise, in conjunction with a paralytic condition of the levator palpebræ, and of those muscles of the globe which are supplied by the third pair of nerves. It is also a very common accompaniment of amaurosis; indeed, in the greater number of cases of the latter affection, the pupil is considerably dilated, not because there is any direct dependence of the iris upon the retina, as is commonly stated, but because the ciliary nerves are implicated in the disease which has given rise to the amaurotic condition.

Temporary mydriasis is readily induced by the application of belladonna and some other narcotics; a fact to which I have before alluded, and which renders their employment in the treatment of internal ophthalmia, and in certain operative proceedings, of so beneficial a character.

Mydriasis is usually attended with considerable confusion of vision; and hence cases of this description are apt to be indiscriminately regarded as amaurotic, when, in reality, the impairment of sight is referrible to a mechanical cause, as is proved by the fact that if the patient be made to look through a small hole in a card, he can discern every object with the utmost distinctness.

The treatment, if the affection be evidently connected with paralysis, should consist, chiefly, in the free abstraction of blood, the internal exhibition of mercury, and the local employment of counter-irritants. When the dilated pupil is owing merely to an atonic condition of the sphincter of the iris, some writers recommend the application of nitrate of silver to the margin of the cornea, so as to produce a small eschar; and this, in some cases, is stated to have been an efficient remedy. Since it can only act as a stimulant, it is clear that its application, either in substance or in a strong solution, to the conjunctiva, in the ordinary manner, will answer just as well as the method of producing an eschar, which must necessarily be followed by opacity. A temporary improvement of vision may be produced, if the retina be unaffected, as before stated, by causing the patient to look through a small aperture in a card.

Tremulous Iris.—The next morbid condition to which I must direct your notice is *tremulous iris*. As a result of internal disease or injury of the eye, we sometimes observe a tremulous state of the iris, so that, on the slightest movement of the globe, it is seen to undulate to and fro. Upon due consideration, it will be evident that the iris could not float about in this manner, were it not for the impulse given to it by the humors. In fact, in many of these cases, the lens is either absorbed or displaced, the vitreous body disorganised, its cells are broken up and removed, and an aqueous fluid occupies both chambers of the eye. In some cases, indeed, the undulation of the humors is quite as perceptible as that of the iris itself. Very often, the structure of the iris does not seem much changed, but the pupil usually loses its power of contraction

and dilatation. The retina is frequently more or less paralysed, but in some instances vision is but slightly impaired. A tremulous state of the iris very frequently follows an operation for cataract, particularly that for solution; and it sometimes results from a blow or other injury to the eye. It is a condition which is usually irremediable.

Variations of Colour.—It is not uncommon to notice the iris of one eye of a very different colour from that of the opposite; thus one is brown and the other blue: this is, in some instances, the effect of disease,—of iritis, for example,—the serous membrane remaining permanently discoloured; whilst in others, there is reason to believe that it is merely a congenital peculiarity, and is, I believe, often hereditary. Large spots of a brown colour, are also observed in some individuals: they are often accompanied with some imperfection of vision, and are probably the result of absorption, the uvea being seen through the iris, just as the choroid is sometimes seen through the sclerotica, when the latter is attenuated.

Wounds of the Iris.—These can only happen simultaneously with injury of either cornea or sclerotica. A simple incision, such as sometimes happens in an operation, is seldom productive of any material mischief. The amount of injury will usually be in proportion to that inflicted on the globe generally, or to the degree of inflammation which succeeds. The iris being very vascular, there will always be more or less effusion of blood into the anterior chamber after a wound; and, consequently, it will be imperceptible, and vision will be suspended, until after the absorption of the effused fluid. When there is much blood, and it is long in becoming absorbed, it may be regarded as an unfavourable omen, inasmuch as it implies mischief to the deeper-seated textures, as of the ciliary processes and choroid, and, probably, of the retina. The treatment of all such cases must be purely antiphlogistic, with perfect repose of the organ and total exclusion of light; which latter objects are best insured by maintaining the margins of the palpebræ in opposition, by the aid of a slight compress and bandage, or of strips of adhesive plaster.

Separation of the Iris from the Ciliary Ligament is an occasional result of injury inflicted upon the eye, more particularly by blows. If it have been effected by great violence, vision will be often considerably impaired, or even destroyed, from the concussion being communicated to the retina. When the injury is limited to the iris, the only inconvenience complained of will probably be that of double vision, the light passing through the new aperture as well as through the natural pupil.

The form of the pupil is also frequently much changed after injuries of the eye, as after wounds of the cornea and sclerotica, from portions of the iris being displaced, and drawn into the wounded part. In some instances, the whole of the iris disappears, probably from disorganisation and ultimate absorption; in others, a portion only is removed in this manner.

Malformations of the Iris.—Certain defects of formation are sometimes observable in the iris. The most common is that known by the appellation *coloboma iridis*. In this case the pupil is of a pyriform shape, the base being towards the centre of the iris, and the apex towards its ciliary margin. I have never observed it, except at the inferior portion of the iris; but Mr. Middlemore states that he has seen it in other directions. There is, of course, an actual deficiency of the texture of the iris at the point where this peculiarity is noticed. It is also stated, that in many cases there is a fissure in the choroid and retina corresponding to that of the iris. In a case which I had recently an opportunity of inspecting after death, no deficiency was observable except in the iris itself. This case I saw immediately after the birth of the child: the deficiency of the iris, which affected both eyes, was attended with a similar defect of the upper lip and of the palate; and on the cornea of one eye there was an opacity of about the size of a pin's-head, such as is seen to be the result of a small ulcer or pustule of that texture, affording another instance of diseased action during the uterine period of existence. The child lived but a few hours; and I was enabled to make a preparation of one of the eyes, which shows this peculiarity of the iris very well. In another case, a patient of my colleague, Mr. Windsor, this defect of the iris was complicated with an opacity of the capsule of the lens in each eye, which, however, was very small (*cataracta stellata*), and did not appear to interfere with vision, the pupil contracting and dilating as usual. This malformation is usually seen in both eyes, but I have very lately seen an instance in one eye only.

A singular case, which I will briefly mention, came under my notice some time since, which at first sight appeared to be precisely of the above description; but, on closer inspection, it was manifest that the deficiency, which was exactly in the position, and of the size and figure of *coloboma iridis*, was confined to the anterior laminæ of the iris, and that the uvea was presented to view, being of a very dark brown colour; the pupil, in reality, being perfectly round, of the natural size, and contracting and dilating in a regular manner; the rest of the iris, and the eye generally, presented a natural and healthy appearance. This curious condition, beyond all question, was congenital, as the eye had never suffered from either injury or disease. It was only observed in one eye.

Other deviations from the ordinary form of the pupil are occasionally noticed: thus, in addition to a pyriform or oval shape, some-

times a rectangular, or other more irregular form has been witnessed; and, sometimes, a double pupil has been observed,—all congenital.

Not only are there partial deficiencies of the iris, but we likewise occasionally meet with instances of its entire absence; and, in other cases, a small ring of iris around the ciliary margin is alone observable. I have not witnessed more than three instances of total deficiency of the iris. In each, vision was evidently very imperfect, although the children seemed to notice many objects, particularly such as were lustrous. The eyes of such individuals have a dark, slate-coloured appearance, when viewed through the cornea, and they have that peculiar oscillatory motion observed in children who are born with defective vision, and are likewise much confused by exposure to a moderately-powerful light. In some instances, the crystalline lens is also more or less opaque, and other morbid accompaniments are occasionally noticed. This condition may be improved by the patient being made to wear a frame fitted to the eyes, with a central aperture for the transmission of a regulated supply of light.

Diseases of the Choroid.

I have now terminated what I have to offer on the morbid conditions of the iris, and have, in the next place, to direct your attention to a few remarks on those of the choroid.

The choroid is by far the most vascular portion of the eye. We might, therefore, presume, *à priori*, that it was frequently the seat of inflammatory action; and this is, indeed, the case. *Choroiditis* is the technical term given to inflammation of the choroid. I know of no means, however, of detecting its existence as a separate affection.

The choroid membrane, as I have said, is extremely vascular, and I can hardly conceive that any considerable degree of choroiditis can exist without the immediate development of symptoms both of iritis and of retinitis. The long ciliary arteries, you will remember, traverse the space between the choroid and sclerotica, and many of the choroidal vessels freely anastomose with those of the iris. The ciliary nerves, moreover, must also be influenced by disordered action of the vessels of the choroid. The retina, likewise, though its vessels are in some degree independent of those of the choroid, will, in many cases, necessarily become involved in the inflammatory condition of the latter texture.

Dr. Mackenzie is the first author who has ventured to give an account of choroiditis as a separate and independent affection; but it may be reasonably doubted if he has been very successful in the attempt. The disease he has described, under this denomination, is one of a very complex character; indeed, I have already given an account of the affection, which he terms choroiditis, under the head of staphyloma scleroticæ. It is contended by Dr. Mackenzie, that the choroid inflames, becomes thickened, and, by its great pressure on the sclerotica, causes attenuation, absorption, and yielding of the latter tunic, and that thus is formed the tumour of the sclerotica, which I have described as staphyloma of that texture, but which he thinks should be termed *staphyloma choroidalis*. Dr. Mackenzie's reasoning does not seem to me sufficiently conclusive. I do not think that staphyloma of the sclerotica is produced by pressure of the choroid, any more than that the same condition of the cornea is produced by pressure of the iris. That inflammation of the choroid, and other internal textures, accompanies most cases of staphyloma scleroticæ, I have before stated; but I have no doubt that other cases occur independently of disease of the choroid; and it is equally certain that choroiditis may exist without any attenuation, or other morbid condition of the sclerotica being induced.

The function of the choroid being of such a character as to have only an indirect influence on vision, and its situation in the interior of the eye rendering it incapable of being scrutinised, we have therefore no direct means of ascertaining when it is the seat of inflammation. Some authors state, that when there is a varicose condition of the vessels on the outer surface of the globe, it may be regarded as a criterion of a similar condition of the vessels of the choroid, and such is very likely to be the case; but this only occurs in the advanced stage of a disease which has implicated the textures of the eye generally. The choroidal veins are often affected in this way to a very considerable extent; and Dr. Mackenzie states that Beer was in the habit of showing a preparation in which the varices were as large as small peas.

Displacement of the pupil upwards is also stated by Mr. Mackenzie to be one of the symptoms of choroiditis. In some instances in which internal ophthalmia has existed, no doubt the pupil may be drawn upwards; but that this is a frequent or necessary result of choroiditis is by no means clear. In many cases of inflammation of the choroid, the pupil is more likely to be contracted than otherwise, from extension of the diseased action to the iris. When the pupil is much drawn upwards, it may probably result, as Dr. Mackenzie remarks, from some of the ciliary nerves becoming paralysed, in consequence of their having participated in the morbid action. There is a point, however, in connection with this subject, which seems to have been lost sight of, which is, that the pupil, in the normal state, is decidedly in the superior portion of the iris; and I have often witnessed, after the application of belladonna, the pupil to be excessively dilated upwards, and but slightly so at the inferior portion; so that I do not regard this symptom to be of as much import-

ance in diagnosis as is attributed to it by some writers.

Many of the cases which are commonly described as amaurosis are, no doubt, cases of choroiditis, complicated with disease of the retina and iris. Inflammation of the choroid may, of course, exist in every variety of intensity and degree, and in the slighter cases vision will not be much impaired; but it is scarcely possible that such an affection can exist, in an intense degree, without producing amaurosis, from extension of the morbid action to the retina. The symptoms of choroiditis will, therefore, in many cases, bear a certain resemblance to those of retinitis; and, in others, the disease will extend to the iris, and be productive of those changes which are characteristic of the presence of iritis.

Although there is a difficulty in defining what are the essential symptoms necessary to constitute a case of choroiditis, yet we may readily imagine that if the choroid become inflamed, it must be speedily rendered apparent by the presence of many of the ordinary signs of ophthalmia, such as intolerance of light, lacrymation, pulsating pain in the organ, impairment of vision, and probably contraction and irregularity of the pupil. If the disordered action be violent, and continue for some time, the other textures will soon become implicated, and there may be complete amaurosis, with a glaucomatous condition of the humors and dilated pupil; or there may be opacity of the capsule and lens, with contracted or irregular pupil; a varicose condition of the ciliary vessels, both external and internal; and, in some of the more protracted or neglected cases, bulging of the sclerotica from attenuation or absorption.

In these complicated cases of internal ophthalmia, although there may be a difficulty in forming a diagnosis, as respects the primary seat, or the exact focus of the diseased action, there can be none as to the treatment required for its subduction; this must be of a decidedly antiphlogistic character, more particularly during the active stage of the disease. Venesection, mercury, and belladonna are the agents to be specially employed, as in the case of acute iritis. In the subacute, or chronic stages, a mild mercurial action should be maintained, and counter-irritation resorted to.

The following case, recently under treatment, appeared to me to have been an example of choroiditis:—W. S., about 45 years of age, somewhat corpulent, but frequently out of health from slight causes, has occasionally suffered from inflammation of the left eye, vision having been destroyed in one of these attacks. For the last five or six weeks, he had been subjected by his medical attendant to bleeding, mercury, and the usual antiphlogistic treatment, for a more than ordinarily severe attack, which had, unfortunately, resisted all attempts at relief. When he came under my notice, there was a considerable amount of vascularity about the external tunics, but it was not of an active character, the vessels being large and varicose, and of a deep-red colour; the sclerotica appeared to be but slightly affected, there being but little of the pink tint observable, and the cornea had a healthy aspect; but the pupil was considerably dilated, and the humors had a dull, glaucomatous appearance; there was but little lacrymation or intolerance of light; the pain had been of an aggravated character, deep-seated and pulsating, and had prevented him from obtaining but a very small allowance of sleep, being much increased during the night. He was considerably reduced from the suffering he had undergone, and the treatment to which he had been subjected, and his health appeared much impaired. I pointed out to him that there were two modes of treating his case; the one by removing the source of irritation, by sinking the organ which was, and had for some time been, entirely useless; the other, to palliate and endeavour to remove the morbid action, by the employment of soothing and anodyne remedies. I advised the latter method to be adopted first, and if this were not speedily successful, with a view to preserving his health from becoming still more impaired, and freeing him from pain, in the course of a short time to submit to the former. I accordingly prescribed belladonna frictions every night around the eye, calomel and opium administered internally, and the use of the tartar-emetic ointment, so as to keep up constant irritation on the temple. After this treatment had been persevered with for two or three weeks, his general health being likewise carefully attended to, there was a decided improvement in the symptoms, the pain abating, the vascularity declining, so that he was soon enabled, partially, to renew his attention to business.

Various morbid changes,—probably the result of continued inflammatory action,—have been described by authors as taking place in the structure of the choroid, such as absorption of its pigment, ossification, of its texture, and the like; but as I have nothing to offer from my own observation on these topics, I need not dwell upon them.

Wounds of the Choroid, and more particularly of the ciliary processes, are usually attended with considerable hæmorrhage into the chambers of the eye. The effused blood becomes absorbed after a certain time, so soon as the accompanying inflammation has subsided. As such an accident is generally accompanied with severe injury of other parts of the globe, as the sclerotica, iris, lens, and retina, there will be considerable danger to vision. The treatment must be strictly antiphlogistic.

It has been supposed by some authors, particularly Beer and Wardrop, that a wound of the ciliary processes is more certainly fatal

to vision than that of almost any other texture of the eye; and, as they particularly notice the dilatation of the pupil which also occurs, it is probable that they consider the injury of the ciliary nerves, in like manner as a wound of the frontal nerve is so considered, to have some effect in paralysing the retina. Mr. Wardrop says—"I have observed several cases of wounds which penetrated the sclerotica, followed by a complete amaurosis, accompanied with a pupil very much dilated. In such cases, it is probable that the ciliary processes were injured; affording an additional proof of the accuracy of Beer's observations on the danger of such wounds in operations of the eye." It is impossible, however, to conceive of an injury which shall be sufficient to paralyse the iris, that shall not at the same time be capable of producing the like effect upon the retina, and that whether produced immediately by the injury itself, or as a result of the inflammation succeeding it.

Malformation of the Choroid.—The only congenital defect that is frequently met with, is the absence of the pigment or colouring matter of the choroid. This state is always seen in combination with a deficiency of the colouring matter of the skin and hair; and persons thus affected are called *Albinos*, from their excessive whiteness. In these individuals, the eyes have a peculiar red appearance, which is communicated to them by the blood circulating in the vessels of the choroid and iris, and which is never observed when the pigment is present. They are much confused by exposure to a bright light; a circumstance which is owing to the irregular reflection of the luminous rays in the interior of the eye, which the dark pigment, by its absorbent property, prevents, when present. It is a condition which does not admit of remedy.

ON THE

SPECIFIC NATURE OF GONORRHŒAL FLUID.

By J. TRENCH, M.D., *Edinburgh.*

In a late Number (No. 24) of THE LANCET, Mr. Chippendale professes to prove the non-existence of a specific contagion in gonorrhœa; a position which he has arrived at from observation, but which is neither new, nor correct, nor supportable by facts or argument. If he consult the literature of the disease, he will find that a *running* from the urethra has been described by our best writers as originating from different sources, and displaying itself in a variety of characters, marked by greater or less degrees of severity, obstinacy, and duration; that his opinions have been repeatedly maintained by others; and, although he may not be aware that they prevail now among practitioners, and give rise to considerable disputes, he will admit, after a little patient inquiry, that they were originally adopted, and have been altogether sustained upon very erroneous grounds. A discharge from the urethra is a wide and comprehensive term, and, taken as a whole, or applied indiscriminately, will convey a very frail idea of the kind of runnings which are presented to us in practice. Gonorrhœa, that is, a flow of vitiated fluid from the urethra, may occur under various circumstances; may manifest itself as a symptomatic affection, as a critical evacuation, and also as an idiopathic disease; and besides being produced by the ordinary mode of infection, will be found to arise from other causes, from the action of mechanical stimuli on the parts, from undue irritation, or interference with the genital organs. But the fluid is not the same under all these conditions; and it is only by conceiving them to be so, and confusing them together, that we embarrass ourselves, and are led to question the existence of a specific poison in true gonorrhœa. It is necessary, therefore, to direct your attention to these several species and their causes, for the sake of distinction, and in order to arrive at a just conception of the mistakes into which I conceive your correspondent, along with many others, have fallen.

In the communication to which I allude in your valuable periodical, Mr. Chippendale informs us that his investigations were pursued in France, where he was in the custom of examining first the affected man in hospital, and afterwards the woman with whom this person had cohabited previous to the appearance of his disease; and, finding, in many cases, no discharge upon the latter, while in the former it was unequivocally present, he draws an inference, not only that gonorrhœa may be spontaneously engendered, but that it is not produced in any other manner. Were his conclusions legitimate, the facts on which they rest are liable to so many sources of error, that they cannot be too cautiously received. We should bear in mind the possibility, the likelihood, of his patients having *elsewhere* contracted their disease, perhaps since the alleged connection, or even previous to it; for we well know that, with certain precautions, Mr. Hunter has said, he would allow a distempered man to cohabit with a sound female, without exposing her to the risk of infection. Moreover, it is extremely difficult, as all practitioners are aware, to discover the existence of gonorrhœa in the female parts, when the woman has any desire to impose upon her medical attendant, and is careful to observe cleanliness, and have the parts properly washed and prepared for her purposes of deception. These are circumstances under which the most experienced have failed, and they are at least calculated to cast doubt on the cases

in question, if not to overthrow every inference deducible from them. But, even waiving these objections, Mr. C. will find that his remarks are not as original as he thinks, nor so correct as he would desire; for it remains to be proved that these were really cases of true gonorrhœa, that they were not simple in their nature, or occasioned merely by weakness, or by the action of some inordinate irritation. You are well aware that there are instances on record, though Mr. C. seems not to have met with them, where a discharge has appeared without any direct cause, or from causes unknown. This Mr. Hunter once observed, in his practice, to accompany the irritation occasioned by the cutting of a tooth; and Dr. Titley has found the same thing to supervene upon an attack of gout. A discharge of matter from the urethra has also been induced by the effects of cold; this is noticed by Mr. B. Bell, in his good work on Lues Venerea and Gonorrhœa Virulenta; he informs us he has met with many such instances, and details one in particular. It is that of a gamekeeper who was attacked annually, at a particular season, with an urethral discharge, previous to which, or about the same time, he used to be engaged in the search of ducks; so that, besides exposure to atmospherical changes, he was compelled to keep his legs immersed in water for several days together. The same author has known it to appear upon a pedlar, after carrying a few pounds of Cayenne pepper for sale with him about his person. The occurrence of a discharge, far from uncommon in females before the age of puberty, is familiar to every one, nor should the strict injunctions laid down by our medical jurists in reference to it be ever forgotten. To Sir A. Cooper, I believe, we are mainly indebted for pointing out, in the most clear and forcible manner, this important fact, which ever since has been the means of explaining many apparent mysteries, and obviating all the rash and egregious errors proper to our ignorance of so momentous a subject. Sir Astley demonstrated that it is more frequent than is generally supposed, in which respect his testimony has been borne out by succeeding writers; and, indeed, the more we see, the more we acknowledge, appreciate, and confirm the truth and value of his remarks. An indisputable case of it came under my knowledge during last winter; and I well remember, some time back, to have seen a child similarly affected, while suffering from an injury of the head after an accident.

To go further, simple gonorrhœa is alleged sometimes to be the consequence of connection with a female labouring under the *fluor albus;* and I think it probable that this affection may be developed into a running, such as we are at present considering. That it has been induced by the acrimonious properties of the menstrual fluid, in its abnormal conditions, there is evidence direct and palpable. This, however, is denied by Mr. C. upon grounds which seem to be anything but irrefutable. He observes, that if such were the case, we should have gonorrhœa in every woman who had ever menstruated; this is argument, wild beyond conception, and, too, calculated to encourage uncertainty and distrust of every principle in medicine. In accordance with it, the disease cannot appear from any cause which does not, in every instance, manifest itself, and in this light should never have existed, since every thing which brings about a simple gonorrhœa is subject to frequent failure. Besides, I beg attention to the fact, that the secretion of one animal, though harmless to it, may prove highly irritating and injurious to a foreign system, as ingeniously argued by Dr. Adams in his splendid work on Morbid Poisons, and expressly enforced by Mr. Abernethy. But, without debating the point, I must refer you to the fact established, as I conceive, by Mr. Judd, in his work on Urethritis and Syphilis, published in the year 1836. This gentleman seems to have paid considerable attention to the causes, manner of contraction, and immediate effects of gonorrhœa, and to the phenomena presented in its commencement; but of three cases, having their origin from the menses, and given by him, I shall select one, as being clear and instructive, and unattended with doubt. A friend of the author had connection with a *genteel woman*, who, he was convinced, had never been exposed to the chance of infection, and, within a period of three days, he was seized with a discharge presenting the ordinary symptoms; the woman, in twenty-four hours after this contamination, menstruated; Mr. Judd examined her, and could detect no ailment whatever; his friend, perfectly satisfied of the woman's soundness, underwent no treatment, but continued to repeat his connection with her, had chordee, and ultimately recovered spontaneously. This is a case very complete, but the comments of Mr. Judd upon it are not so worthy; he draws from it a view which is somewhat the same as that of Mr. C., and is, therefore, erroneous. It is as well to observe here, that Dr. Remak, of Berlin, although he may have revived the opinion of a discharge being sometimes produced by the menstrual fluid operating on the male urethra, was not the first to notice it, for the fact itself has been mentioned by writers from an early time. For instance, it was insisted on by James Cataneus, in his treatise, to be found in the Luisian collection, where, after entering at some length into the subject, he gives his opinion in very decided terms, which may be conveyed to you in these few words: It arises, says he, "a spermate famellæ, quod dicitur gutta, quod a venis totius corporis decidit, et membrum virile si contingat, ipsum inficere poterit: quod in pluribus experti fuimus." On the strength of this, and upon the supposition that gonorrhœa and syphilis are

identical in nature, he was led to maintain that the latter disease invariably arose from the effects of the menses. His treatise is exceedingly curious, not merely for the principle that he urges, but in as far as he deduces from it some strange distinctions between the degrees of virulence of the menses as discovered from the characters assumed by that secretion, and afterwards manifested by the disease produced.

In addition to these kinds of *running*, one remains yet to be mentioned. The remark of Mr. C. with regard to the vices of youth is perfectly correct; but even in this he has only repeated a fact which has been long known, been never doubted, and which adds not a whit to the strength of his argument, much less to the stability of his view. The elegant Tissot, in his book "On the Crime of Onan," translated and published in London, in 1766, devotes a great portion of his labours to the consideration of a "simple gonorrhœa," the general accompaniment and consequence of self-pollution. This effect of excessive venery was well known to Hippocrates and his school, and has been recognised in the writings of all our ancient physicians, as Tissot fully proves; it may have been the *brenning* of England which Becket introduced to our notice; it was probably this disorder which, we are told by Astruc, infested the brothels at Avignon, and called forth the sympathies of the good Queen Jeane of both the Sicilies. This it is that gives support and plausibility to the false doctrine of M. Devergie, a doctrine with which Mr. C. seems to be unacquainted, where he says it is supposed "that gonorrhœa is always contracted by infection." But why adduce further evidence, why appeal to the testimony of other writers for that which the smallest experience must now admit to be fully established? Observation long ago, and even in our own time, has declared, that a muco-purulent, or, more properly, a *puriform* discharge from the urethra does occasionally occur, without the application of gonorrhœal matter to its surface, and is even seen, unpreceded by promiscuous intercourse; therefore the only question to be decided is, whether this affection, this simple *running*, be not entirely different from a true, contagious gonorrhœa.

It may be as well to remind you that one of the greatest authorities on this subject, M. Ricord, of the Venereal Hospital in Paris, draws an obvious distinction between the cases that we have already considered and true gonorrhœa, which I hold to be specific. M. Ricord actually directs the treatment for each complaint to be conducted on separate principles, and remarks that, on a patient presenting himself in hospital, we are liable to blunder, by mistaking the one for the other. The specific requires more active treatment than the simple gonorrhœa. Thus, in the true disease, blood-letting may be useful, if not absolutely necessary, in its commencement; but if the gonorrhœa arise from excess in venery, or any other irritating cause, whose effects are ultimately depressing, by pursuing such a course we should only debilitate the system, do the man little service, and perhaps render his case tedious and difficult of cure. This is a practical fact demanding attention, for in simple discharge the patient will quickly recover, and a little rest will be found to supersede all other interference. But what, you may inquire, is there to authorise a distinction between two cases so evidently alike? My answer is this, that the fact of gonorrhœa being sometimes spontaneously generated, must not, as Mr. C. supposes, argue against the existence of a specific matter. A specific does not mean a cause that produces a change which can be occasioned by nothing but itself. Such would be going so minutely to work that nothing could be specific. But a specific is that which operates, always producing and capable of producingt he same changes. We know that gonorrhœa is depending on a state of inflammation; upon this premiss we are certain, that as long as the mucous membrane of the urethra has been exposed to matters acrimonious, and of an irritating nature, or been subject to simple inflammation, or to circumstances favourable to the production of this very common state of morbid action, so long must the human species, as well as many of the lower class of animals, have been labouring under a discharge from the genitals. But this is nothing to the point. The quality of that matter which never fails to produce a discharge, when properly applied, is the question at issue. I admit that gonorrhœal fluid may produce this inflammatory condition of the urethra, merely by its acrid and excoriating property; but this acridity is undoubtedly specific, for it is sustained by a never-failing matter. It may act like a simple irritant, but its action is inevitable; and although the symptoms which it produces are not peculiar and confined to itself, yet they never cease to attend it. To be more fully understood, let us have recourse to analogy. We know now for certain, and no one can doubt, that *chancre* is a specific ulcer, and has a palpable virus; we have also learned that, by means of caustic potash applied to the living tissue, a sore is produced identical in appearance to chancre, presenting all its characters; but such cannot be held as proof that chancre is not *specific*. So it is with gonorrhœa; we may imitate the disease, but never can that be adduced against its specific nature. In like manner, aloetic medicines act upon the great gut, and an accumulation of fœcal matter in that situation will cause diarrhœa, which is an artificial purgation; but such cannot argue against the specific action of aloes on the rectum, no more *then* can the occurrence of a discharge in the urethra without infection be said to establish the non-existence of a virus in gonorrhœa.

The argument of Mr. C., adduced from the symptoms of catarrh, to overturn the idea of a specific in gonorrhœal fluid, is ill-chosen, is nothing to the purpose, and proves neither one thing nor another. Certainly this discharge from the Schneiderian membrane is not communicable; on being applied to its proper seat in a foreign system it cannot give rise to any symptoms; never does it manifest itself in any shape when conveyed to another mucous surface. It is dissipated without remedy, wears away of its own accord, similar to a simple urethral running. To this condition, properly, may be compared the cases of Hunter, of Bell, of Titley, the cases by which Mr. C. has been deceived, and all the instances I have already alluded to; none of them were specific, and in this respect they differ from a true gonorrhœa. Mr. C. appears to have confounded the effects of a gonorrhœa with the disease itself, for he supplies us with another argument, suggested by the great liability there is, after a discharge has already existed, to a repeated return of it without injection. True, after gonorrhœa, we are constantly subject to a kind of running; this, the gleet of authors, is entirely different from the specific affection, and depends merely on a weakness or laxity of the membrane; and because it partakes not of *specific* nature, we have no grounds for alleging that its precursor, or first cause, was not virulent. But I must once more have recourse to illustration. A specific sore, a chancre after running its proper course, becomes no longer infectious, but loses its virus and degenerates into a state of reparation, according to M. Ricord. On viewing the primary ulcer, in this its last stage, we are not to pronounce, from any of its present characters, that *chancre* is not *specific*: no more then, on the approach of a gleet, are we justified in the assumption, that there was no virulence in the matter of which this is merely a consequence. Indeed, a chancre after having been healed, especially with callosity, will sometimes burst out afresh, and prove a troublesome, obstinate sore; this is not, but the original was, *specific;* in the very same light should we regard gonorrhœa and its connection with a gleet. The gonorrhœal poison, having highly excited the mucous surface and its glands, causes them morbidly to secrete, and to perform their function with increased rapidity; and, like other stimuli, if allowed to proceed without interruption, destroys the tonicity of the urethral apparatus and renders it flaccid, when the weakened membrane will emit a thin and insubstantial fluid, which it continues to do, until it regains its natural condition.

So much for the *facts* on which the non-existence of a specific poison in gonorrhœa has been advanced, and now I beg to recur very briefly to the hypothetical portion of Mr. Chippendale's argument. Indeed, my only vindication for trespassing at such length upon your pages, is the importance, though not evident at first sight, of this question in practice; and also my firm conviction that, to attain a safe and satisfactory line of conduct in our treatment, an obvious distinction should be made between these two affections, apparently similar, but virtually different—a *distinction* to which sufficient attention is not in general devoted, and without which practice must assume a routine aspect.

The lively and somewhat amusing description of the spontaneous generation of gonorrhœa, pictured for us by Mr. C., is only surpassed by one writer at present in my recollection. I allude to Falk, who published a treatise on Lues Venerea in London, in the year 1772. This author gives an account of the origin of the disease, far more graphical, more spirited and convincing, perhaps, than any other on record, either previous to or since his time: with Mr. C. he does not rest at the marriage-bed and the effects of grateful wine, he does not present us with the visionary horrors which domestic happiness is said to entail upon its votaries; he goes further than this—he rushes onwards, and carries us along with him to the brothel; views *there* the fearful dismay, sorrow and remorse of the unhappy debauchee; traces on her the effects of "blue ruin," and violent, unceasing coition; depicts with the accuracy and feelings of a Stoic, the shattered constitution and degraded mind of the victim of lust; and ends his painful story by pointing at the festering corruption, the putrefying matter, the development of disease in the gangrenous womb of the filthy prostitute. But while he indulged in this speculation, he held out to us a *virus* which Mr. C. has altogether denied. He had not the advantage of Sir Everard Home's view of the parts during coition—a very interesting view, from which is framed a beautiful speculation, but still a view which I cannot discover to bear the least connection with the matter in point. It is possible that this grateful enlargement, described by Mr. C., and this gradual and salutary closure—this vigilant watch preserved by the mucous membrane—the gentle exudation which it lavishes on its surface for its own protection—this clasping of the female parts—and the entire position, critical in the extreme, and never ending till relieved by a full flow of seminal fluid to carry with it all impurity and danger—may assist in warding off *infection;* but that we thereby prove that no such infection does exist, is opposed by reason and by experience, and especially contradicted by the experiments of Duncan and B. Bell, which Mr. C. has altogether lost sight of. If, indeed, we acknowledge the hypothesis of Mr. C., and other respectable writers who go along with him; if a little wine, a heated system, and connection with a virtuous woman, were sufficient to engender a disease which frequently

lasts for months, and occasionally leaves behind it some permanent defect, then marriage would be a curse, and we might say farewell to every thing but misery for mankind, and ample work for the surgeon.

I will not, though consistently might we, bestow on Mr. C.'s argument the term "puerile," which he ventures to apply to an old and long-established opinion. Indeed, I had hardly thought that any member of the profession in our day, would argue upon the characters of a disease from the treatment which seems to cure it. Can we say, because copaiba and cubebs and astringent injections are serviceable in other complaints as well as gonorrhœa, that such should indicate the non-existence of a specific matter—that the disease is not virulent, since it has no remedy, singular and confined to itself? But Mr. C. goes *yet* to a further extent, and because he has found *colchicum* to be useful in a discharge from the urethra, he suggests that the disease probably partakes of a rheumatic character! With comments on this kind of theory I shall no longer occupy your time, nor trespass on your readers' patience; I only add that it is time to abandon such dogmatic reasoning, the prolific source of spurious doctrines.

Edinburgh, Sept. 14, 1840.

ON THE

FUNCTION OF THE OVARIES IN MENSTRUATION.

We have received the following sketch of the authorities upon this curious and interesting subject from an old correspondent:—

In the article on M. Gendrin's Philosophical Treatise of Medicine, the following remark is made:—"That M. Gendrin should have found the ovaria ruptured in five cases where menstruation was present, is a remarkable coincidence. In a communication read at the Medico-Chirurgical Society, by Dr. Robert Lee, last year, a similar occurrence was stated to have been met with by him in two instances. We want but a few more such facts to establish M. Gendrin's hypothesis, or, at least, to give it the aspect of a law rather than of a mere coincidence: and until these are obtained, we would again repeat,—*not proven.*"

In justice to Dr. Lee, we beg to mention, that the two instances above alluded to, of ruptured Graafian vesicles, found in the ovaries removed from the bodies of women who had died during menstruation, are merely supplementary to the collection of facts which Dr. L. published seven years ago in the "Cyclopædia of Practical Medicine;" and also that the views deduced from them are essentially the same as those lately brought forward by M. Gendrin as a new theory of menstruation. We alluded to M. Negrier's claims to priority in opposition to Gendrin; but it is quite evident that neither the one nor the other has any right to be considered, *historically*, as original observations, however they may have been so in fact. It will be seen, from the following extract from the "Cyclopædia of Medicine," that Mr. Cruikshank must be looked on as the original observer of the fact, and Dr. Lee the author of additional and confirmatory facts, and, indisputably, as far as we can trace, the first propounder of the view that menstruation is connected with certain changes in the ovaria.

There are certain facts which seem to prove, that it is not to the influence of the uterus, but of the ovaria, that we are to attribute all the changes which take place in the female pelvis, in the mammæ, and uterine system, at the period of puberty; and it seems not improbable, from the following facts, that it is also to certain changes in the Graafian vesicles, at the time of menstruation, that all the phenomena of that singular process are to be referred.

On the 11th of March, 1831, we examined the body of a young woman who died during menstruation from inflammation of the median basilic vein. The left ovarium was larger than the right; and, at one point, a small circular opening, with irregular edges, was observed in the peritoneal coat, which led to a cavity of no great depth in the ovarium. Around the opening, to an extent of three or four lines, the surface of the ovarium was of a bright red colour, and considerably elevated above the surrounding part of the peritoneal coat. On cutting into the ovarium, its substance around the opening and depression was vascular, and several Graafian vesicles of different sizes were observed; the right ovarium was in the ordinary state; both Fallopian tubes were intensely red and swollen, and their cavities were filled with menstrual fluid. The lining membrane of the uterus was coated with the same fluid, and the parietes were soft and vascular; the size of the uterus was not increased.

In the autumn of the same year a woman, under twenty years of age, died suddenly, from acute inflammation of the lungs while menstruating. The body was examined by Mr. John Prout, and the uterine organs were brought to us for inspection. A red, soft, elevated portion of the right ovarium was also here observed, and at one part the peritoneal coat, to a small extent, had been removed; the edges of the opening were extremely thin and irregular, and in the substance of the ovarium, under the opening, was an enlarged Graafian vesicle filled with transparent fluid; numerous small blood-vessels were seen running along the peritoneal coat of the ovary to the opening. When the substance of the ovarium was laid open, several vesicles of various sizes, and at differ-

ent depths, were found imbedded in it; the left ovarium presented a natural appearance; the free extremities of the Fallopian tubes were gorged with blood; their cavities were filled with a red-coloured fluid; the uterus was not enlarged, but the parietes were gorged with blood, and the lining membrane of the fundus was coated with menstrual fluid; a small coagulum of blood likewise adhered to the upper part of the uterus.

On the 2nd of July, 1832, Sir A. Cooper, to whom the writer had mentioned these cases, sent him the ovarium of a woman who died from cholera while menstruating. The ovarium was much larger than natural, and at one point there was a small, irregular aperture in its peritoneal coat, through which a portion of a slender coagulum of blood was suspended. On cutting into the substance of the ovarium, it was found to be occupied by three small cavities, or cysts; one of which was filled with a clear, ropy fluid; another with semi-fluid blood; and the third, which communicated with the opening in the peritoneal coat of the ovarium, with a firm coagulum.

On the 18th of November, 1832, the uterine organs were removed, by Messrs. Girdwood and Webster, from the body of a young woman who had died suddenly the preceding day, when the catamenia were flowing. Both ovaria were remarkably large, and both Fallopian tubes were red and turgid; the peritoneal coat of the left ovarium was perforated at that extremity which was nearest to the uterus by a circular opening; around which aperture, for several lines, the surface of the ovarium was elevated, and of a bright scarlet colour, like extravasated injection. The margin of this opening was thin and smooth, and did not appear to have been produced by laceration; its centre was slightly depressed below the level of the edges, but there was scarcely the appearance of a cavity beneath; the right ovarium was much larger than the left, and when cut into, a cavity, or cyst, was found, which was filled with half-coagulated blood: the peritoneal coat of this ovarium was entire; the uterus was large, and when cut into, the parietes appeared to contain an unusual quantity of blood; the inner membrane was of a bright red colour, and coated with a thin layer of catamenial fluid; both Fallopian tubes were red and turgid; and the interior of the left was filled with menstrual fluid, but nothing in the form of a Graafian vesicle could be detected in the tube. The appearances now described have been accurately represented in a drawing made from the parts within two hours after they came into the author's possession.

In a paper by Mr. Cruikshank, published in 1797, there is an account of similar appearances having been observed by him in a young woman who had died at the monthly period. "I have also," he says, "in my possession the uterus and ovaria of a young woman who died with the menses upon her." The external membranes of the ovary were burst at one place, from whence I suspect an ovum escaped, descended through the tube to the uterus, and was washed off by the menstrual blood.—(Cyc. of Pract. Med., art. Ovaria.)

The following is the case recently communicated by Dr. Lee to the Medico-Chirurgical Society.

"On the 14th of January, 1837, a woman, thirty-seven years of age, died suddenly in St. George's Hospital during menstruation. No morbid appearance was found to account for her death. A small circular aperture was observed in the peritoneum of the left ovarium, near the point where the corpus fimbriatum is fixed to the extremity of the ovarium. This opening communicated with a cavity in the substance of the ovarium, which was surrounded with a soft yellow substance, of an oval shape."—Med. Chir. Transactions, vol. xxii., p. 338. From the "British and Foreign Medical Review," No. XX., p. 592.

PECULIAR CASE OF HICCOUGH.

To the Editor of THE LANCET.

SIR:—I would thank you to insert this brief account of a fact which I think of much interest, and worthy of observation.

Oct. 29, Dr. Powell directed my attention to Edward Rose, æt. 61, who is affected with rheumatism in the shoulder, which a sprain has made more painful. He stated that almost always when he moved the joints, he was affected with hiccough. I carefully investigated the matter, and *on examining the shoulder which was tender, he hiccoughed violently and successively. On his raising the arm*, at my request, the same thing happened, and he related that it invariably occurred *when he dressed and undressed. On his rising from the sitting to the erect posture*, I once noticed its event; he said that he pained his shoulder at that time. I dashed some cold water *suddenly* in the face; *a deep inspiration followed, and hiccough also.* In this instance, as in the preceding, the muscles of the joint were influenced. I could not ascertain that the affection ever happened unless the shoulder was moved; I conversed with him many minutes without noting it at all. He was surprised when I observed to him that I thought the affection of the shoulder and the hiccough were connected. His wife mentioned that, in general, he very rarely suffers hiccough, and is not nearly so subject to it as she is herself. The patient informed me, that last winter his ankle became painful, after his feet had been wet (with a rheumatic affection probably), and that he used to suffer from cramp in the night-time; and that often, when he left his bed, and

walked about the room "to relieve it," he experienced hiccough.

Nov. 3, I again saw the patient. Dr. Wilmot also examined him. The shoulder was *less painful*, and he did not hiccough *so often* when he moved it, and not with the same violence when he did so, as before. There is an evident relation between the degree and frequency of the hiccough, and the greater or less exalted sensibility of the shoulder-joint. He does not now always hiccough when the joint is moved, or even when he knows that it is examined for the purpose of producing the affection.

This case is singular, and would have been once attempted to be accounted for by the term sympathy; a word which Müller so well describes, "as explaining every thing, and yet nothing." I cannot but view it as dependant on the reflex function, illustrative of which there remain, doubtless, many interesting pathological phenomena concealed; and to this also would I attribute some symptoms in a case which Dr. A. Thomson has narrated, (LANCET, vol. ii., p. 1, 1838-39,)—"She found that on pressing the cicatrix of a wound, in the forepart of the left hand, which had been inflicted by the breaking of an earthen vessel, a peculiar suffocating sensation was experienced in the gullet, and a crowing sound elicited." This instance is dependant upon the same principle as that I have described, though it exemplifies its operation in a different manner.

All cases of muscular action excited by irritation, and clearly of an *involuntary kind*, that happen in parts where the "true" spinal marrow influences in health, are attributable to its agency. I am, Sir, your obedient servant,

WILLIAM FREDERICK BARLOW.

Tunbridge Wells, Nov. 9, 1840.

THE COERCION SYSTEM.

INHUMAN TREATMENT OF THE INSANE IN THE BETHLEM LUNATIC ASYLUM.

To the Editor of THE LANCET.

SIR:—In your remarks, Mr. Editor, on the statement and counter-statement made, at the last county meeting of Middlesex magistrates, by Sir Peter Laurie and myself, you very properly observe, "either Mr. Tulk or the President must be in error: and if the former, he has been grievously imposed upon; if the latter, how little must he know of the real management of that hospital." It may go some way towards determining whether my respected informant, or the worthy president of Bethlem, best deserve to be impaled on the horns of your dilemma, if I give you my notes of a visit which I have since made to the hospital, along with Mr. Sergeant Adams. When you read these notes, and they are yours to make what public use of them you may think right, you will probably be strengthened in your opinion that the matter must not rest here; and you will be pleased to learn that the governors of the hospital think so too: for now that a charge has been publicly brought, they are beginning to bestir themselves; and there is every reason to hope that in course of time their eyes will be opened, if by no other means, most surely and effectually by a Parliamentary inquiry, to the existence of abuses within the walls of their institution, which hitherto they never dreamt of. The president will find that a patient who under provocation attempts to strike an officer, may be punished—of course with a view to his cure—by solitary confinement in utter darkness; a punishment more severe by far than any proposed separate confinement of prisoners, which I have heard him oftentimes feelingly deprecate, as calculated to drive a sane man mad. What will be his indignation when he learns that punishments of a like kind, only more grievous in their form, have been inflicted on an irresponsible lunatic in the hospital over which he presides! How the medical officers and the steward will be able to excuse this rigorous treatment of the insane to their president, except on the principles of homœopathy, it may be difficult to conjecture. He has told the public that he disapproves of the practice altogether, and that it would not be permitted in Bethlem. It is practised, though not permitted in Bethlem. They will have no other way then of healing his wounded sympathies, except by showing him, that, though when applied as a punishment it will drive a sane man mad, it has quite the contrary effect on the insane when administered as a medical remedy. I am, Sir, yours faithfully,

CHARLES AUG. TULK.

Duke-street, Westminster,
Nov. 10, 1840.

NOTES OF A VISIT TO BETHLEM HOSPITAL.

On the morning of Saturday, the 31st of October, 1840, I accompanied Mr. Sergeant Adams to Bethlem Hospital. He was asked, on entering, by an attendant, whether he wished to see the steward; but he declined seeing him, and desired to be attended only by a keeper. Our visit, as I understood from Mr. Sergeant Adams, was principally to see a patient, I. D. S., who had been for some years a prisoner in the Westminster Bridewell, and whom, on a previous visit to Bethlem, he found confined in a dark cell. The first ward we entered on the male side seemed wholly deserted; but as we walked through it, we heard the moans and cries as of a person in distress from a room on the right-hand side. We had gone forward with the keeper a few paces beyond the room, when, attracted to the spot by the increased moans and cries of fear, we turned and went

into the room. The door, if it had any, was open; and lying on the ground we saw a wretched-looking object, seemingly as if he was just recovering from a fit. Upon being lifted up by the keeper, it was painful to witness his nervous excitement; he trembled all over, and continued to moan and cry. The keeper, after placing him upon a form, and telling us that he was a poor timid creature, about to be discharged from the hospital, in consequence of his fits, left him as he had found him, with no one to take charge of him, and quiet his fears. This patient we afterwards saw in a cell lying on his bed.

From this we passed into the male criminal wing, where Mr. Sergeant Adams, who was going forward to point out to me the dark cell in which I. D. S. was, as he supposed, then confined, was stopt by the keeper, and told that he was in another cell, which we were passing. He came out, and expressed his joy at seeing us: he spoke of the cruelty with which he had been treated; of his having been mocked with the promise of such a dinner as he wished to have, and then laughed at when the promise was broken; of his having been furnished by the steward with, I think, three weeks' solitary confinement in a dark cell, because, being exasperated by such conduct, he had attempted to strike him. We went into the cell, and had the door shut upon us, and I could not perceive the faintest glimmering of light. It was not a darkened cell in which the light is softened, not excluded, but truly a dark cell, in which I could perceive no crevice, even around the door, by which the light could enter; while a window shutter, near the top of the cell, closed and locked, so as effectually to shut it out on the side opposite the door. Here I. D. S. had been confined. We learnt from the keeper, as well as from I. D. S., that at one time on his refusal to take food, the stomach-pump had been used. We asked to see the strait-waistcoat and the coercion chair which had been employed on the occasion. We were shown into a small room looking out upon one of the airing grounds: there we found the coercion chair, and there the waistcoat, which with his own consent was put on I. D. S., to show us in what way he had been fastened, hand and foot, while food was being administered to him. While this was going on, and we were talking with I. D. S., and the two keepers were then with us, the criminal patients in the airing ground flocked, many of them, around the window, and the sergeant made several inquiries about two patients whom we saw among them in restraint; the keeper, who had the care of them, was very unwilling to give us any information about them; he shuffled, and gave such evasive answers that at last his fellow-keeper reproved him for it, and the information was only wrung from him by the sergeant, as a governor, insisting upon a direct reply; we then found that their hands were kept fastened both by night and day to the iron belts that went round their bodies.

We were afterwards taken, at the desire of Mr. Sergeant Adams, to the cell of a patient of, I think, the name of Fransome. Upon opening the door the stench was loathsome in the extreme; I could scarcely enter it, for it was as bad as the filthiest dog-kennel. This patient was in a maniacal state, but with occasional, though rare, glimpses of coherency. He seemed aware that we were speaking in terms of commiseration of his wretched condition, for he frequently said that he was shamefully used; and he offered some pieces of woollen, which he had torn off his dress, for us to smell, in proof of his dirty condition. The only thing that seemed clean about him was the straw on which he was lying, and which we were told had been changed that morning. His whole appearance was truly pitiable: his hands were manacled, and he was chained to the bed. He could not leave his bed, and, as it appeared to me, could only partly raise himself up by twisting his body. We were informed by the keeper that he was never taken out, but lay in his filth until his straw was changed. As well as could be made out from a hasty examination of the books in the house-surgeon's room, this patient had been subjected to the restraint for, I believe, *sixteen* weeks; but of this I will not speak positively.

We found from the keeper that patients in Bethlem Hospital not unfrequently devoured their own excrement, and that no ways were resorted to in order to prevent it, except the very insufficient one of taking them to the water-closet just before bedtime. The obvious remedy had not suggested itself of placing some food by the bedside.

Before we left the hospital, we went into the house-surgeon's room along with the steward; there the conversation turned on the case of I. D. S. and his punishment in the dark cell. It is right to mention that the steward denied its being intended as a punishment for the attempt at an assault, assuring us that it was a part of the necessary medical treatment, and that he was not put into the cell immediately on making the attack, but only the same day. How soon after we did not learn.

The surgeon admitted that I. D. S.'s complaint about the dinner, which had roused his anger, was well-founded; that after the promise made to him, that he should have mutton chops and oysters, the latter were refused him; and the reason the surgeon gave us for the broken promise was that, after having eaten two mutton chops, there was not the least necessity for his having the oysters.

RESTRAINT OF INSANE PERSONS.

REPLY OF "A LOOKER-ON" TO DR. COOKSON.

To the Editor of THE LANCET.

SIR:—Whatever obscurity may prevail in parts of Dr. Cookson's letter, this fact is at least clear, that "the case of Miss A. is a scandal to the house; it may, perhaps, with truth be said, to the medical profession; but it is not quite so apparent upon whom the censure ought to fall; and as Dr. Cookson has now avowed himself the author of the 'Diary,' and entered the lists with an anonymous correspondent," he will not, I trust, object to answer the following queries, which must suggest themselves to the mind of every impartial reader of the letters of Mr. Hadwen, and Mr. Hill himself:—

1. Was not Dr. Cookson one of the physicians of the asylum during the three years when restraints are said to have been abolished?

2. Are there any entries of Dr. Cookson similar in principle or spirit during three years to the entries published respecting Miss A.; or were any complaints made by him during that period of the abolition of restraint, or any opposition to the published annual reports which spoke so highly of the management at Lincoln?

3. Is Mr. Hill's statement, that the instances which Mr. Hadwen has given in his "straightforward letter" as instances of restraint, are, in truth, instances of seclusion only?

4. What does Dr. Cookson mean by stating that his hands are tied up? Has he not full power to direct Miss A. or any other patient to be put under any species of restraint he thinks fit, whilst she is under his care; and if he has, why does he not do so?

5. Has Dr. Cookson, at any time within the last four years, up to the present time of writing, put any patient under restraint; and has he not always had, and has he not now, the power to do so?

6. If he has not, by what resolution of the committee, or in what other manner is he restricted?

7. What does Dr. Cookson mean, when he states, that the disgraceful state of Miss A.'s rooms in the spring of 1840 were discovered by Mr. Smith, when it appears by his own extracts from his own journal, that he was, during the month of May, the physician in attendance on her? If Miss A.'s rooms were in the state described by Dr. Cookson, how could he possibly visit her for a month, or even a day, and not discover it himself?

Dr. Cookson will pardon me for putting these questions. I assure him most sincerely that, although I have not the pleasure of a personal acquaintance with him, I believe him incapable of making *false* statements, or doing anything unbecoming a gentleman; but to the jaundiced eye all things are yellow; and it does, I confess, appear to me, that when making his entries and addressing the Editor of THE LANCET, a little bile has, probably, without his knowledge, found its way under his inkstand. I am, Mr. Editor, your obedient servant,

A LOOKER-ON.

London, Nov. 12, 1840.

P.S.—I have been looking with much anxiety to an answer from Dr. Corsellis to the letter of "A Looker-on;" the real history of that case is far more important to the medical world than the squabbles of the Lincoln Asylum.

THE HUMANE SYSTEM OF TREATMENT FOR THE INSANE.

To the Editor of THE LANCET.

SIR:—Upon a reperusal of the report of the proceedings of the magistrates, as contained in THE LANCET for Nov. 7th, I cannot but feel struck with two circumstances developed by the discussion which ensued. The first of these is, that in a committee of well-informed men, engaged in carrying into effect, in the county asylum at Hanwell, one of the most brilliant and beneficent schemes, for the public health and security, that it ever fell to the lot of man to execute, there should exist one who could openly confess that he was dissatisfied with the results or with the working of that system. The *results* being, that more cures were effected by the humane system than by any other mode of treatment that had ever been employed; the *working* proving, that all coercive and cruel measures were unnecessary; that the system was one of continual kindness and benevolence; that instruments for applying force were unknown; that there was not one dark chamber in the entire building, nor a single strait-jacket in an institution containing upwards of eight hundred insane patients. Surely, Sir, that such a statement could have been put forth by one of the visiting justices of Middlesex, must have been a mistake on the part of the reporter. It is impossible to suspect a gentleman, occupying the responsible position of a magistrate, of giving utterance to such an opinion, without creating the feeling, that he must be either personally ignorant of the treatment which the patients actually receive in the institution, with the guardianship of which he has been entrusted by his fellow-magistrates; that he is, in fact, a non-visiting justice; or that he must have given ear to the narrow-minded sophistry, or envious and insidious tattling of enemies to the institution, and, at the

same time, to the best interests of humanity. But, Sir, we call upon this gentleman for his facts in proof of the bad working of the humane system, and, at the same time, for the facts of all the enemies of the system, if, in truth, there be any such. That the physicians of Bethlem should aver that Dr. Conolly's system is impracticable, is quite natural; for to admit that it be good to soothe the excitement, to minister to the comforts of the insane, would not only call down upon them increased duties without increase of salary, but would also brand them as the interested supporters of a system of cruelty and oppression.

And this calls my attention to the subject of the selection of medical officers to fill the offices in lunatic asylums. There is, perhaps, no medical appointment of such importance to the public as theirs. They have the immediate inspection of the patients; they are required to know the extent and nature of the disease, and the moral character of the sufferers; they have to supply them with medicine, to direct their hygienic and dietetic treatment, and to see that the keepers and nurses perform their duty to the fullest, and neither neglect nor maltreat the poor creatures entrusted to their charge. The magistrates, as well as the public, must be well aware, that all medical men, with the best disposition and intentions, are not equal to this task. They require, then, a judicious and careful selection, in which, not heaps of useless and mendacious certificates are to be regarded as the standard of a man's efficiency; but a full understanding and appreciation of the duties; industry and activity to carry out the proper system of treatment; kindness and urbanity of manner, and, when it can be obtained, experience. But, unfortunately, these offices are too frequently held by young medical men, often crude from the lecture-room, and eager to be employed for a few years, until they can obtain something better, or see a fair opening for practice. Can it then be wondered at, that the humane system should present difficulties in such hands? It must, however, be well remembered by all, that when that plan of treatment fails, the error is not in the system, but with the medical officers who are entrusted with carrying it into execution.

But the opponents of the humane system have no arguments founded on reason to bring to bear against that which is too benevolent for their hearts to comprehend, and, therefore, they need to have recourse to the most puerile allegations. You have had *one* suicide in the course of twelve months in a community of upwards of eight hundred insane individuals (many of them suicidal), says one. Is not the accusation the most brilliant evidence in favour of the humane system? Your expenses for glazing are enormous, from the freedom of your non-coerced patients, says another! But, Sir, will not the public reply, that it is far better that they should be put to the expense of a few additional panes of glass annually, than that the horrors of chains and torture should be enforced upon the poor, irresponsible lunatic?

But I fear, Sir, that these unjust attacks are not so much actuated by any interest in either the economy of life, or of the public expenditure, but by an abominable disposition to obstinate and senseless opposition. How are we to regard the pseudo-philanthrophy of Sir P. Laurie, in his professed utter disapproval of seclusion in dark rooms, when it is proved that no such treatment is adopted at Hanwell, but that, by a curious aberration in his own thoughts, this is the very practice which is pursued in the hospital over which he is president; or is this remarkable *contretemps* of the intelligent president to be regarded as a public and humble confession of his own neglect?

Again, Sir, what are we to understand by the assertion of Mr. Laurie, "That the visiting justices had been kept in ignorance of the proceedings in the asylum?" Ignorance of what proceedings, is the question which the public put, and have a right to have answered. It is clear that the visiting justices must, and ever will, be ignorant of proceedings which have no existence but in the slanderous misrepresentations of those whom time will unmask. But if the magistrates be ignorant of anything that actually passes within the walls of the asylum, they themselves are in fault, and need reproval. To be ignorant of that which passes in their own institution, is to acknowledge their inefficiency as directors of its proceedings, and the public have a right to call upon them to resign their office.

How different, Sir, is the manly and enlightened defence of the humane system, evinced by the learned and excellent chairman, Sergeant Adams, by Mr. Tulk, and by Mr. Pownall; and it is to the joint exertions of these gentlemen, that we must now look for the support promised to Dr. Conolly in the carrying out and perfecting of his system. That they may succeed to the fullest extent, must be the hope of every right-minded Englishman; and in their benevolent efforts they may number amongst their warmest friends,

PHILANTHROPOS.

Nov. 15, 1840.

Organic Chemistry in its Application to Agriculture and Physiology. By JUSTUS LIEBIG, Professor of Chemistry, Giessen. Translated by LYON PLAYFAIR, Ph. D. 8vo, pp. 387.

THIS volume constitutes one of the valuable reports emanating from the British Association for the Advancement of Science; the author has principally expressed his opinion of such institutions. "One of the most remarkable features," says he, "of modern times, is the combination of large numbers of individuals representing the whole intelligence of nations for the express purpose of advancing science by their united efforts, of learning its progress, and of communicating new discoveries; the formation of such associations is in itself an evidence that they were needed." But the author has not been content with mere verbal praise, for the present work is a substantial proof of the immense labour of which the association has been the exciting cause, and the important deductions thereby deduced afford the most satisfactory evidence of profound mental exertion. At the meeting of the association at Liverpool, Professor Liebig, who was then present, was requested to draw up a report upon the state of organic chemistry; he at once acquiesced in the proposition of the association. We have now evidence before us of the faithfulness of his promises. In this volume, which constitutes only part of the report which he is still employed with, he informs us, that he has endeavoured to develop, in a manner correspondent to the present state of science, the fundamental principles of chemistry in general, and the laws of organic chemistry in particular, in their applications to agriculture and physiology,—to the causes of fermentation, decay, and putrefaction,—to the vinous and acetous fermentations, and to nitrification. The conversion of woody fibre into wood and mineral coal, the nature of poisons, contagions, and miasms, and the causes of their action on the living organism, have also been elucidated in their chemical relations.

We are not unaware that there is a class of men in the practice of the profession who object to this mode of studying physiology; the class may be termed the class of mere *observers*, or superficial inspectors; they observe, for example, a portion of membrane, red and inflamed, and they say, "rubor, tumor, dolor, cum calore," constitutes inflammation. Another class, however, is fast springing up in the country (we trust to weigh in some measure against the host of foreign, precise observers), who, combining experiment and accurate analysis with the surface observation alluded to, affirm that the symptoms enumerated are merely accompaniments of results of some chemical or mechanical alteration in the constitution of the organs in which the so-called inflammation exhibits itself; and that these must be intimately sifted and elucidated before we can arrive at any essential knowledge of the vital action which influences every change in the animal economy, they view vital action as something superadded, as the rudder which guides and directs the various processes. They hold, therefore, that although the *results* of vital action and the *action itself* are inseparable, yet that the philosophical mode of attaining a knowledge of the latter, is by premising the careful study of the former. Newton, when he discovered the principle of *gravitation*, began by observing the fall of an apple; he dropped the substantiality with one hand and caught it with the other: thus *science*, which is nearly another name for truth, teaches us to rise from small things to great.

It has been long a subject of discussion among physiologists, from whence do plants derive their subsistence? That they consist of carbon, nitrogen, and of hydrogen and oxygen in the proportion to form water, has been long known, but the source of the constituents has not hitherto been investigated with sufficient precision; Liebig has, undoubtedly, thrown much new light on some parts of this subject, and has thus contributed a valuable addition to botany. We will briefly present to our readers a sketch of the new views which he broaches in this volume.

"*Source of the Carbon of Plants.*—The proper mode of investigating this subject is to analyse the seed of a plant which shall form the subject of experiment; then to examine the soil in which the seed is planted, and, lastly, to determine the composition of the atmosphere into which the stalk of the plant is to emerge after the vegetation of the seed. The most generative soil consists of silica and alumina, mixed in different proportions according to the nature of the rocky stratum, from whose disintegration it has been derived: besides these substances, however, we always find a variety of earthy or soluble

salts, such as sulphate of lime, carbonate of lime, nitrate of potash, &c. Sand of itself forms a barren soil. Limestone is capable of suppurating vegetation only in a scanty manner; and clay, which is merely a soil in which alumina is the predominating ingredient, is only suited for raising particular vegetables. All natural generative soils, however, may be improved by an acquaintance with their composition, and the proper admixtures of those elements which, by observation, we have been enabled to distinguish as the characteristic causes of richness of soil; the most important of the latter is vegetable matter, all species of which contains carbon. Here, therefore, we discover a deposit of carbon, capable, it might appear, of serving as nourishment to the embryo and growing plant. Contrary to the received opinion of physiologists, Liebig affirms, that the carbon of the vegetable matter contained in soils does not enter as a constituent into the composition of the plant, whose root is immersed in it. Vegetable matter by decay is converted into a brown substance, which varies in its chemical composition according to the facilities afforded to the atmosphere to act upon it. This substance, which has been assumed to be a definite chemical compound, and has been honoured with the name of humic acid, and has been asserted to afford nutrition to vegetables, Liebig affirms to be no acid at all; and that there is not the shadow of a proof that it exerts any influence on the growth of plants in the way of nourishment in the state in which it exists in the soil. The humic acid of chemicals is the result of the decomposition of humus by alkalies. The following examples are adduced to show that the humic acid cannot possibly supply the carbon:—40,000 square feet, Hessian measure, of wood land, yield annually, according to Dr. Heyer, on an average, 2650 Hessian pounds of dry fir wood, which contain 5·6 lbs. Hessian of metallic oxides. Now, according to the estimates of Malagute and Sprengel, 1 lb. Hessian of lime combines chemically with 10·9 lbs. Hessian of humic acid, 5·6 of the metallic oxides would accordingly introduce into the trees 61 lbs. Hessian of humic acid; which, admitting humic acid to contain 58 per cent. of carbon, would correspond to 91 lbs. Hessian of dry wood; but we have seen that 2650 lbs. of fir wood are really produced. From the same premises we find that 40,000 square feet of land should produce only 85 lbs. of wheat straw, whereas they afford, independent of roots and grain, 1780 lbs. Hessian of straw. These examples undoubtedly supply the next satisfactory evidence, that the *humus* or *humic* acid of soils cannot supply the carbon of plants, and powerfully refute the opinions of physiologists who entertain such an idea. The only question which remains for solution, Does this reasoning apply to the whole of the vegetable matter contained in soils? Liebig replies to this query, by stating that all plants and vegetable structures undergo two processes of decomposition after death; one of these is *fermentation*; the other, *decay*, *putrefaction*, or *eremacausis* (ἠρεμα slow and καυσις combustion): for decay of woody fibre is accompanied by a peculiar phenomenon. This substance, in contact with air or oxygen, converts the latter into an equal volume of carbonic acid, and its decay ceases upon the disappearance of the oxygen. If the carbonic acid is removed and oxygen replaced, its decay recommences; that is, it again converts oxygen into carbonic acid. Woody fibre consists of carbon and the elements of water; and if we judge only from the products formed during its decomposition, and from those formed by pure charcoal, burned at a high temperature, we might conclude that the causes were the same in both; the decay of woody fibre proceeds therefore as if no hydrogen or oxygen entered into its composition. A very long time is required for the completion of this process of combustion, and the presence of water is necessary for its maintenance; alkalies promote it, but acids retard it: all antiseptic substances, such as sulphurous acid, mercurial salts, oils, &c., cause its complete cessation. Woody fibre in the state of decay is the substance called *humus*.

"But although the Humus of soils cannot by possibility supply the carbon which exists in plants, yet as, under favourable circumstances, it is continually undergoing decomposition, and evolving carbonic acid, the latter may supply food during the incipient stage of growth. When the plant is quite matured, and when the organs destined to enable it to procure food from other sources are formed, the carbonic acid of the humus is no longer required. Plants, however, do not exhaust the carbon of a soil in the normal condition of their growth; on the contrary, they add to its quantity. Hence it is evident that they must receive the greater part of their carbon from the only other source which remains to them, viz., the atmosphere.

"The atmosphere varies slightly in the relative proportion of its constituents according to elevation, and according to the moisture mixed with it. The following table expresses the most recent results (Kämtz Lehrbuch der Meteor. I., 47, Handwörterbuch der Chemie, 4 liefer, 570):—

Altitude.	Nitrogen.	Oxygen.	Car. Acid.
0	78·950	21·000	0·050
10,000	79·885	20·070	0·046
20,000	80·820	19·140	0·042

The quantity of carbonic acid, therefore, in the atmosphere, amounts to $\frac{1}{2000}$th part by bulk, or allowing for errors by experiment, $\frac{1}{1000}$th part *weight*. We see from this fact

how minute the quantity of carbonic acid can suffice for such important and essential purposes, nature has designed; and how fallacious must be the assertions of those who would have us believe that man could exist in an atmosphere containing 3 and 4 per cent. of this deleterious gas. Insignificant as the quantity of carbonic acid in the atmosphere appears to be, how can we suppose, it may be asked, that the immense mass of vegetation on the surface of the earth can be supplied with food from such a source? Liebig has made the following calculation, which it must be admitted is only a rough estimation:—Admitting that a column of air of 2216·66 lbs. Hessian weight rests upon every square Hessian foot of the surface of the earth, the $\frac{1}{1000}$th part of this will be carbonic acid, which contains upwards of 27 per cent. of carbon. Hence it may be shown that the atmosphere contains 3000 billion Hessian pounds of carbon; a quantity which amounts to more than the weight of all the plants and of all the strata of mineral and brown coal which exist in the earth: the carbon is thus presented to the leaves of plants in combination with oxygen. The decomposition of this acid, and the conversion of the carbon into woody fibre, is usually viewed as performed under the direction of what, for want of more precise designation is termed vital principle; but whatever be the nature of this principle, the act of transformation is a purely chemical process.

Source of the Hydrogen of Plants.—Woody fibre consists of 36 atoms of carbon and 22 atoms of hydrogen, derived from the decomposition of 22 atoms of water. Plants, therefore, would appear to decompose water; the hydrogen of which is assimilated along with carbonic acid, while its oxygen is separated. If the latter change takes place, 8·04 parts of hydrogen must unite with 100 parts of carbonic acid, in order to form woody fibre; and the 72·35 parts of oxygen, which were in union with the hydrogen, must be separated in a gaseous form. Although woody fibre contains carbon, and the component parts of water, ordinary wood contains an excess of hydrogen. This is owing to the presence of the green principle of the leaf, wax, resin, and other bodies, such in hydrogen. The vital process by which this decomposition is effected in plants, is the reverse of the chemical processes engaged in the formation of salts, carbonic acid; zinc and water *give out* hydrogen, whereas in plants oxygen is the body *separated*.

"*Source of the Nitrogen of Plants.*—Let us picture to ourselves, says Liebig, the condition of a well-cultivated farm, so large as to be independent of assistance from other quarters. On this land there is a certain quantity of nitrogen contained both in the corn and fruit which it produces; and in the men and animals which feed upon them, and also in their excrements, we shall suppose this quantity to be known. The land is cultivated without the importation of any foreign substance containing nitrogen. Now, the produce of this farm must be exchanged every year for money and other necessaries of life, for bodies, therefore, which contain no nitrogen. A certain proportion of nitrogen is exported with corn and cattle, and this exportation takes place every year without the smallest compensation; yet after a given number of years, the quantity of nitrogen will be found to have increased. Whence, we may ask, comes this increase of nitrogen? The nitrogen in the excrements cannot reproduce itself, and the earth cannot yield it. Plants, and consequently animals, must, therefore, derive their nitrogen from the atmosphere. The source of the nitrogen being definitely settled, it remains to be determined in what form the atmosphere supplies it. Liebig considers that the supply of ammonia existing in the atmosphere is afforded by manures, ammonia is the last product of the decomposition of animal substances, and nitric acid results from the transformation of ammonia. Liebig has ascertained that ammonia exists in the air and in rain-water in considerable quantities. When several hundred pounds of the latter collected in the neighbourhood of Giessen, were distilled in a copper-still, and the first two or three pounds evaporated, with the addition of a little muriatic acid, a distinct crystallisation of sal ammoniac was obtained; he has also found ammonia in melted snow. Hünefeld has proved that all the springs in Greosswalde, Wick, Eldena, and Copenhagen, contain carbonate and nitrate of ammonia. The source of the ammonia in these cases is undoubtedly from the decomposition of animal matter. Liebig found that the ammonia contained in rain-water possessed an offensive smell of perspiration, sufficiently indicative of its origin. He has found also that the saccharine juices of plants, when evaporated, emit ammonia. Animal manure appears to act only by the ammonia supplied by it. Putrid urine is employed as a manure in Flanders. The dung of the sea-fowl, termed *guano*, in Peru, administers fertility to the soil: the soil contains no organic matter in these cases; and the manure merely affords urate, phosphate, oxalate, and carbonate of ammonia. The action of some of the earthy salts, as sulphate of lime and chloride of calcium, according to Liebig, depends upon their property of fixing the ammonia of the atmosphere. Sulphate of lime, and chloride of calcium, are converted under the action of the carbonate of ammonia of rain-water into sulphate of ammonia and sal ammoniac, which are both very soluble. Charcoal has a great absorbing power over ammonia. Decaying wood approximates charcoal in its composition; hence *humus*, which is decaying wood, or

vegetable matter, not only would appear to act as a manure by employing carbonic acid, but also by its property of absorbing ammonia. Ferruginous soils and burnt clay influence the growth of plants by the property which the oxides of iron and alumina possess above all other metallic bodies, of forming solid compounds with ammonia. The presence of animal matter, as of blood upon swords, has been detected many years after its deposition by the property which it possesses of dissolving ammonia when a strong base is brought in contact with it. This test is, however, liable to error, because all rust of iron fixes ammonia; the ammonia thus fixed by the constituents of the evil mentioned, is dissolved in part by every shower that falls, and is conveyed into the soil in a state of solution. It is impossible to view these precise notions of Liebig without admiration; they exhibit how essentially necessary to life dissolution is, or, in the words of the author, 'that death, the complete dissolution of an existing generation, becomes the source of life for a new one.'

"*Inorganic Constituents of Plants.*—It has been inferred by some, that the presence of gases exercise no influence upon the growth of plants, because it was found by Saussure and Berthier that magnesia was contained in the ashes of a pine-tree from Mount Breven, while it did not exist in the ashes of the same species from Mont la Salle; and that even the proportion of lime and potash was very different. Liebig has shown, however, that although the relative quantities varied, yet that they both contained an equal number of equivalents of metallic oxides; or, what is the same thing, the quantity of oxygen contained in all the bases was in both cases the same. This he illustrates by several striking examples. The presence of vegetable alkalies appears to be necessary to the growth of plants, and, in general, they are associated with organic acids; the nature of their function, however, is not obvious, unless it be to neutralise the organic acids formed by the process of vegetation, although several important facts have been ascertained in connection with their uses: for example, when we increase the crop of grass in a meadow by means of gypsum, we remove a greater quantity of potash with the hay than can, under the same circumstances, be restored. Hence it happens, that after the lapse of several years, the crops of grass on the meadows manured with gypsum diminish, owing to the deficiency of potash; but if the meadow be strewed from time to time with wood-ashes, even with the lixiviated ashes which have been used by soap-boilers, then the grass thrives as luxuriantly as before. The next question which must strike the inquirer most forcibly is, from whence are derived the alkaline bases now referred to? Some physiologists have settled this question, by affirming that the vital power in plants was capable of generating the alkalies and metallic oxides. Liebig, however, shows that there is no necessity for adopting such gratuitous assumptions. Chemistry reveals to us extraordinary facts respecting the volatilisation of substances, which, under certain circumstances, remain fixed in the strongest heat of a fire. Bopiacic acid is not sublimed or decomposed by fire, even at a white heat, yet, when dissolved in water, and the solution evaporated, it escapes insensibly along with the steam; it is thus procured in a natural state: the hot steam which issues from the interior of the earth, is allowed to pass through cold water in the lagoons of Castel Nuova and Cherchiago. Ammonia is always obtained along with boracic acid: this occurs even in the manufactures at Liverpool. Hence Liebig concludes, 'this ammonia has not been produced by the animal organism, it existed before the creation of human beings; it is a part, a primary constituent of the globe itself.'

"Sea-water is continually evaporating and carrying along with it some of the fixed constituents. Dr. Dalton has detected common salt in the atmosphere of Manchester. M. Wilhelmi, director of the salt-works of Nauheim, hung a plate of glass between two evaporating houses, which were about 1200 paces from each other; and found, in the morning after the drying of the dew, that the glass was covered with crystals of salt on one or the other side, according to the direction of the wind. Thus, by the continued vaporisation of the water of the ocean, its salts are spread over the whole surface of the globe, and supply a source for the salts found in the ashes of plants where the soil could not have yielded them. Besides, potash and the other alkalies, viz., soda, magnesia, and lime, which often replace it, other substances are required to sustain the life of plants. Phosphoric acid has been found in the ashes of all plants hitherto examined, and always in combination with alkalies, or alkaline earths. Silica is also extracted from the earth by plants. We may consider also chloride of potassium, common salt, sulphate of potash, nitre, and other matters, as necessary constituents of several plants. Clayslate contains generally small quantities of oxide of copper; and soils formed from micaceous schist contain some metallic fluorides. Saussure showed that plants required different quantities of earthy matters at different periods of the growth; and hence it would appear, that plants restore a portion of the earthy matter again to the soil. The fallow-time is that period of culture during which the land is exposed to a progressive disintegration, by means of the influence of the atmosphere, for the purpose of rendering a certain quantity of alkalies capable of being appropriated by plants.

Crops, therefore, may be raised on fallow land, provided they do not abstract potash from the soil. *Vicia, faba, phaseolus vulgaris, medicago sativa, ervum, lens,* are of this nature.

"*Interchange of Crops.*—Agriculturists in this country know well that they cannot grow the same grain upon the same land with advantage for any number of successive years, although in some of the British colonies this practice is followed without injury to the crop for successive periods. The reason given for this by Decandolle appears highly plausible: he supposes that the roots of plants imbibe soluble matter of every kind from the soil, and thus necessarily absorb a number of substances which are not adapted to the purposes of nutrition, and must subsequently be expelled by the roots, and returned to the soil as excrements. Now, as excrementitious matters cannot be assimilated by the plant which ejected them, the more of these matters which the soil contains, the more unfertile must it be for plants of the same species. But these substances may be highly nutritive to other plants, and hence the importance of a change in the rotation of crops. We find a similar analogy existing in the animal creation. Excrementitious matter, which has been expelled as useless for the purposes of nutrition by one set of animals, serves as food to others. The dung of horses is partially but greedily devoured by crows, domestic fowls, and other birds.

"*Manure.*—The chemical nature of animal manure may be arrived at by a comparison of the food and egesta of an animal. The whole process of nutrition in an animal, consists in the progressive extraction of all the nitrogen from the food, so that the quantity of this element found in the excrements must always be less than that contained in the food. 100 parts of the fresh dung of the cow contain 0·506 nitrogen. According to Boussingault, hay contains 1 per cent. of nitrogen; consequently, in the 25 lbs. of hay which a cow consumes daily, ¼ lb. of nitrogen must have been assimilated. This quantity of nitrogen entering into the composition of muscular fibre, would yield 8·3 lbs. of flesh. This is, however, much above the daily increase of a cow: we must look, therefore, for the nitrogen of the food assimilated not in the solid but in the liquid excrements. Liebig concludes, that the vegetable constituents serve in some measure to supply carbonic acid to the plants; but this supply must be trifling, since land is only manured at great intervals: the peculiar action is to restore the inorganic constituents which they contain."

Liebig terminates the first portion of his work by some observations on the peculiar action of specific manures. Bone-dust is valuable in consequence of the supply of phosphates which it affords to hay; 8 lbs. of bones afford nourishment to 1000 lbs. of hay, or wheat straw. Urine supplies ammonia to the soil; the evaporation of every pound of ammonia causes a loss of 60 lbs. of corn.

We terminate our remarks on the first portion of this invaluable contribution to science, by recommending its attentive perusal to the profession. Our next notice will refer more particularly to physiology.

UNIVERSITY COLLEGE HOSPITAL.

RETENTION OF URINE—BAD CATHETERISM—INFILTRATION OF URINE—DEATH.

J. J., aged 28, labourer, a tall, stout man, fat, but not very muscular, and of a dull, phlegmatic temperament, was admitted August 29, under the care of Mr. Liston, labouring under abscess of the perinæum. He has always enjoyed good health, has been used to hard work; and although, whilst reaping and mowing, he often drank large quantities of beer, he has not been often in a state of intoxication. He has been for a long time subject to an occasional difficulty in making water, although he generally passes his urine freely, and in a stream "as large as the stem of a tobacco-pipe." At such times he would experience much pain, and desire to micturate, and yet would only be able to pass a small quantity at a time, and that only after violent straining. This would last for a day or two; and then, without taking any active measures, he would find himself able to void his urine as usual. About a month ago, whilst hard at work in the fields, he was seized with one of these attacks, which, he thinks, was brought on by taking sour beer; and, not wishing to be deprived of his employment, he went to a surgeon, who attempted to pass a catheter into the bladder to draw off the water. In this, however, he failed; and after, as the patient thinks, having injured the urethra considerably, desisted from his endeavours. The patient suffered much pain, and lost nearly half a pint of blood from the urethra. The retention of urine continued till the next morning, when the coagula came away, and after them about three pints of urine in a full stream. The pain then gradually diminished; and for two days he made water easily, and in natural quantity. This time he suffered retention for two days, when he called in another surgeon, who succeeded in getting a catheter into the bladder, and drawing off a large quantity of urine. In a few days he noticed a small swelling behind the scrotum; it was painful and very tender, the pain being of a

throbbing character, and attended with a sensation of weight. In about a week after first observing this, he felt something give way, and immediately a considerable quantity of blood was discharged per urethram; but the patient did not observe any matter mixed with the blood. This hæmorrhage continued for some days, at last the urinary passage became blocked up with coagula, which were from time to time forced out by the urine. The swelling in the perinæum meanwhile increased, and became more painful; the patient was also seized with shivering, burning heats, and sweatings, alternately; his appetite failed, and he was obliged from weakness to keep his bed. For the last two days he has not been able to retain his urine, which continually dribbles away. It is high-coloured and acid. The surface of the body is cold and damp; the pulse is very feeble; the countenance anxious; and the limbs tremulous. The bowels have been kept regular by castor oil. Appetite bad; tongue dry and brownish; much thirst.

On examining the perinæum, an immense swelling was observed between the anus and scrotum, and projecting rather more on the left than the right side. The tumour was of a dull brownish-red colour; it had a boggy feel, and was very tender on pressure.

Five or six ounces of bloody offensive urine passed just before he was carried into the ward, which afforded him great relief. The patient had suffered retention for some hours, and the urine burst out suddenly. Mr. Liston made a deep incision, about three inches long, in the mesial line of the perinæum, directing the bistoury upwards, and cutting towards the scrotum. A quantity of very offensive dark, chocolate-coloured fluid immediately gushed out, and continued to flow to about the extent of fourteen or sixteen ounces. Great relief was immediately experienced.

August 30. Yesterday evening warm gin and water was administered frequently, until the patient became rather warmer, and his pulse more quiet. He slept tolerably well. A considerable quantity of urine has escaped from the wound, but none has passed the natural way. This morning he is in a profuse perspiration; his pulse is 140, very small; the tongue foul; bowels opened once last night. Continue the gin and water. Full diet, and three pints of beef-tea daily.

Sept. 1. Pulse rather stronger, but still rapid and compressible; limbs very tremulous; appetite indifferent. Does not complain of any pain. Urine flows constantly from the wound in the perinæum, which is very foul, and filled with cellular tissue in a sloughy state. Bowels open.

2. Is more feverish to-day; pulse fuller, and more rapid; face flushed, tongue dry; bowels relaxed; urine still runs through the wound. To have eight grains of Dover's powder every night at bedtime; and an effervescing draught every three hours.

4. The urine does not pass so freely by the wound, which is blocked up with sloughs; and, as the bladder appears distended, Mr. Liston passed a catheter into that organ, and drew from it about a pint and a half of urine, mixed, towards the last, with muco-purulent discharge. The catheter was secured by tape. Omit gin; bowels less relaxed.

6. Another catheter introduced to-day. The one removed black, and coated near the beak with gravel-like deposit. Muco-purulent discharge very abundant; sleeps better. To have an ounce of the infusion of diosma crenata, with half a drachm of tincture of henbane, and fifteen minims of liquor potassæ, three times a-day. Continue Dover's powder.

8. Catheter replaced by a clean one, which was passed with some difficulty. A grating sensation experienced as the instrument passes along the urethra. A large slough is hanging out of the wound in the perinæum, and the most depending part of the scrotum is discoloured, and apparently gangrenous. The loose piece of slough was removed by the scissors, and an incision made through the mortified part of the scrotum.

10. A considerable quantity of calcareous deposit discovered on the end of the catheter, which was removed to-day, and a clean one introduced directly. The urine flows by the catheter, and by the wound.

It is still mixed with muco-purulent discharge, and contains much gritty deposit. The sloughs have separated from the perinæum, and the sore looks tolerably clean. The cavity exposed is very large, and the urine runs through it, leaving the deposit on its surface. Mr. Liston ordered the following mixture, instead of the diosma crenata. Half a drachm of balsam of copaiba, half a drachm of castor oil, twenty minims of liquor potassæ, one drachm of mucilage of accacia, and ten drachms of cinnamon water, to be taken three times a-day. Chop daily. Six ounces of wine, and four ounces of brandy, instead of the gin. Arrow-root and barley-water.

12. The mixture made the patient so violently sick, that he was obliged to discontinue its use. He is now taking his former mixture again; he is in a very low state. He says, that before his present attack he had often observed a sediment in his urine, but no gravel. From this date he continued to get more feeble; the urine became alkaline, and evolved a quantity of carbonic acid gas. He then suffered pain in the lower part of the abdomen. The urine, however, flowed freely when the

plug of the catheter was removed. He died on the evening of the 19th.

After-death Appearances.

On opening the abdomen, and turning up the omentum, it was found that the lower part of this process was slightly adherent to the anterior wall of the abdomen, between the umbilicus and apex of the bladder; and, on separating this adhesion, some dark grey, softish lymph was torn through, and an abscess displayed, which appeared to surround the bladder. The peritonæum in the pelvis was much thickened, and of a bluish grey colour. There were no adhesions to the intestines, no flakes of loose lymph, and no vascularity or other sign of recent inflammation; the bowels, indeed, were rather paler than usual. There was a small quantity of serous effusion, apparently, in the pelvis; but, from a quantity of sero-purulent fluid escaping from the abscess round the bladder, the moment the omentum was raised, it was impossible to ascertain how much of this existed there beforehand. On dissecting the perinæum (a catheter having been passed into the bladder), it was found that the incision made by Mr. Liston extended down to the urethra, behind the bulb, and that into it opened abscesses, which were traced along the side of the prostate into the scrotum on the left side, and along the left crus penis, exposing the erector penis of that side. These abscesses were lined by a membrane, and covered with grey lymph and purulent matter. All the tissues composing the scrotum and perinæum were indurated and thickened by the deposition of tough lymph.

The rami of the pubes, &c., were now sawn through in a perpendicular direction, about an inch on each side of the symphysis pubis; and the rectum having been tied and divided, and the kidneys and ureters detached and brought downwards, the whole of the genito-urinary organs were removed from the pelvis, together with the rectum, for the purpose of being more closely examined. The kidneys were about half as large again as natural, and invested in a quantity of fat. Their surface was mottled and granular in texture, and several small yellow patches were seen, which, on being incised, yielded, from small cavities, a curdy kind of pus. The cortical structure of the kidneys was rather pale, and very soft and friable; the pelvis and ureters very much dilated, and covered with yellow lymph on their mucous surface.

On separating the peritonæum from the lower part of the abdominal walls, and cutting through that part which was reflected from thence over the bladder, the abscess before mentioned was fully exposed. Its walls were of unequal thickness, lined with a smooth membrane of a greyish-black colour, and easily ruptured at the upper part, though tough and strong below. In the cavity was found a small quantity of sero-purulent fluid. The bladder was much elongated, and in a sloughy state; its coats were hardly distinguishable, being extremely thin in several places. Towards the fundus was an opening about as large as a sixpence, with black, ragged edges. On the outside, and near the margin of this aperture, was a quantity of calcareous deposit, which seemed to have escaped from the cavity of the bladder and the abscess. Slitting open the bladder, its inner surface was found completely covered with a buff-coloured, calcareous deposit, similar in appearance to coarsely-powdered Bath brick, moistened with water.

Below the fundus of the bladder, and above the rectum, was a small, circumscribed abscess, containing about an ounce and a half of well-digested pus. The prostate was completely hollowed out with abscesses opening into the urethra.

WESTMINSTER MEDICAL SOCIETY.

Saturday, Oct. 31, 1840.

Mr. Gregory Smith, President.

CAUSES OF SUDDEN DEATH—WHAT IS LIFE?

After some preliminary observations, Mr. Winslow stated that sudden death was of much more frequent occurrence than it used to be, and that therefore the subject was deserving of the serious consideration of the profession; and as medical men were always looked to in the course of justice to determine the cause of sudden death, it was not less their interest than duty to learn the exact state of knowledge respecting it. He considered that all diseases were invariably indicated in their early stages by certain signs, by which their existence might be predicated; and by paying attention to the incipient manifestations of latent organic disease, we might often prevent the development of those serious vital affections that suddenly extinguish life. After referring at some length to the physiological causes and phenomena of sudden death, he brought before the society an analysis he had made of 200 cases in which life was suddenly extinguished, from which it appeared that 40 arose from diseases of the heart; 20 from affections of the brain; 25, brain conjoined with disease of the heart; 18, abdominal affections; 20, aneurismal tumours; 10, convulsions; 32, mental excitement, with and without bodily disease; whilst under the use of mercury, 2; from lightning, 2; during parturition, 6; idiopathic asphyxia, 4; drinking cold water, 5; pulmonary apoplexy, 5; hæmorrhage from the Fallopian tubes, 1; air in vessels of brain, 2; blows on the stomach, 4, &c. &c. The majority of these cases were women. In 1838, Mr.

Farr states that, out of 3012 cases of sudden death that occurred, 1840 were males and 1172 were females. Women, it appears, have less chance of dying suddenly than men, in the proportion of 10 to 18. The majority of cases of sudden death arise from hæmorrhage. From Jan. 11 to October 17, 1840, 524 instances of sudden death took place in the metropolis alone. Between the ages of 1 and 15, 142; between 15 and 60, 246; and from 60 upwards, 131. Mr. Winslow then considered in the following order the organic affections which commonly give rise to this awful calamity:—1, Diseases of the heart and large vessels; 2, Diseases of the lungs, and those causes that interfere with the functions of respiration; 3, Diseases of the brain and appendages; 4, Diseases of the stomach and abdominal viscera generally. The affections of the heart, that often predict a sudden suspension of life, are as follows:—Rupture of the heart; relo-condition of the heart, or asphyxia idiopathica; syncope angina pectoris; hydatids of the heart; metastasis of disease to the heart; the sudden bursting of aneurismal tumour. Mr. Winslow related many instances of fatal rupture of the heart. The first case is related by Harvey, and Morgagni, who himself died suddenly of this disease, narrates many similar cases. He considered that the symptoms which usually indicated liability to this affection are—violent pain beneath the sternum and in the arms, pain in the præcordia and epigastrium, cold extremities, &c. In the majority of cases the heart has undergone some previous disease, either ulceration or softening, or there is a disproportion in the thickness of its muscular parietes. When the heart has undergone a structural alteration, it requires but a slight cause to rupture it. Mr. Winslow referred, at considerable length, to sudden death from *asphyxia idiopathica*, a decisive point noticed by Mr. Chevalier, which consists of a sudden loss of power in the minute vessels to propel the blood they have received from the heart; in consequence of which this organ, after having contracted so as to empty itself, and the dilated organ, continues relaxed for the want of the return of its accustomed stimulus, and dies in that dilated state. This affection seizes the patient suddenly, and, if proper remedies be not administered, death ensues in a few moments. It is often mistaken for apoplexy. Mr. Winslow then alluded to sudden death from *protracted syncope*. A person drops down in a fainting fit; relief is not instantly afforded, the heart never recovers its action, and death ensues. A case of this kind was related, caused by wearing tight clothes. Mr. Winslow thought that death often resulted from *spasm of the heart*. Hippocrates, Herophilus, and Bichat, relates cases of this character. In this way the latter physiologist considered that great mental emotion caused death. Mr. Winslow entered into the consideration of sudden death resulting from the transmission of disease to the heart, to the bursting of aneurismal tumours, hydatids in the heart, vomica suddenly bursting in the substance of the lungs, effusion in the chest, pulmonary apoplexy, which disease was considered generally to be conjoined with disease of the heart. The affections of the brain that caused sudden death were next dwelt upon; viz., 1, Cerebral apoplexy; 2, Latent inflammation, causing suppuration; 3, Abscesses suddenly bursting; 4, Generation of air in the vessels of the brain. He considered that sufficient attention was not paid to the latent or insidious affections of the centre of the nervous system; that inflammation and the formation of pus often took place, and extinguished life before we were aware of its existence. Many cases, illustrative of this position, were related. Morgagni conceived that sudden death often resulted from what he termed "a repletion of the blood-vessels of the brain by air," which had been developed there spontaneously, compressing, by its rarefaction, the organ of the nerves, and thus destroying life. Mr. Winslow related the particulars of several instances of sudden death, in which the vessels of the brain were found filled with air; but expressed a doubt as to whether it was in our power to trace a connection between the extinction of life and the generation of this fluid in the vessels of the brain. The affections of the stomach and intestines were next considered. Many fatal cases of ulceration of the stomach and intestinal canal were referred to, caused by the presence of *lumbrici*, in which death was suddenly and unexpectedly induced. The other affections which Mr. Winslow brought under the notice of the society, as deserving of its consideration, were as follows:—Death from mental excitement; drinking cold water; rupture of the biliary ducts; hæmorrhage from the Fallopian tubes in utero-uterine conception; inhalation of noxious gases, whilst under the influence of mercury, caused by exposure to intense cold, or to the heat of the sun.

Dr. JOHNSON considered that sudden death should be restricted to those cases in which death occurred instantly and mysteriously. He should not include apoplexy, when death was preceded by coma or other symptoms, among cases of sudden death. In his own experience he could only refer to three classes of cases of sudden death. The first consisted of cases of hydrothorax, the second of aneurisms, and the third of affections of the heart. He had found the first to be the most frequent among the causes of sudden death; although, generally, he believed that heart-disease was the most frequent cause.

Dr. LEONARD STEWART referred to cases of sudden death, arising from obscure dis-

eases of the spinal marrow, and from dislocations of the vertebræ.

Mr. WADE related two cases of sudden death, arising from the presence of fibrinous concretions in the cavity of the heart, and which caused death by blocking up the auriculo-ventricular opening. In one case the patient suffered much from palpitation, and was bled by her medical attendant to the extent of three or four ounces. This produced syncope, from which she did not recover. There had been no previous symptoms, except occasional attacks of dyspnœa, with cough. She got up well on the morning of her death, and was seized with the palpitation of the heart, and great distress in breathing, suddenly. In the other case, the patient had been the subject of puerperal convulsions, which she apparently recovered from, under the employment of large blood-lettings. She fell back, however, having been seized with palpitations, and died suddenly.

Dr. MARSHALL HALL thought that Dr. Johnson had restricted the subject of sudden death within too narrow limits. Sudden death might be foreseen or unforeseen. The former was the case in detected disease of the heart and large vessels; the latter he had known to occur in the state of exhaustion from loss of blood, and in the bloodless condition which obtains in chlorosis. One lady, after uterine hæmorrhage was going on well, rose from bed in order to evacuate the bladder, and sunk down and expired immediately. He had known three instances of sudden death from chlorosis, under similar circumstances of effort and the upright position. Sudden death occurred in some cases of colica pictonum: this subject was mentioned by Heberden, Louis, and Andral. It also occurred when the system was under the influence of mercury, with or without previous symptoms of erethismus mercurialis. It was well known that sudden death occurred in angina pectoris. When there was ossification of the coronary arteries, the cardiac circulation, or that within the substance of the heart itself, was probably interrupted, and the motion and the vitality of this most vital organ were extinguished at once. Dr. Hall had met with an interesting case, in which the usual symptoms of angina pectoris were present; and sudden death, which had been predicated, occurred. In this case the heart was found to be loaded with fat. This he considered had arrested the cardiac circulation mechanically. The coronary arteries were free from disease. He thought that other diseases of the heart, as hypertrophy, valvular disease, &c., might induce sudden death, by arresting the circulation in the substance of the heart itself. He did not agree with Mr. Winslow in his enumeration, after Bichat, of the relative importance of the vital organs, viz. the brain, the lungs, the heart. The brain was not so necessary to life as Bichat had supposed. Not only did a tortoise, the brain of which had been removed by Redi, live many months; and the wound, in the salamander decapitated by Dumeril, actually heal; but the fowl, from which M. Flourens removed the cerebrum, survived a very considerable time. It was true that the encephalous human fœtus was not *viable*, but it might live for fifty hours; and very young animals bore the loss of the cerebrum in the inverse ratio of their age. Neither was the brain, as stated by Mr. Winslow, the source of respiration. It was the medulla oblongata, according to the discovery of Legallois, which was instantly and absolutely necessary to the performance of this function. A patient died suddenly in the water-closet; an event by no means rare, and worthy of attention. On examination, a clot of blood was found compressing the medulla oblongata. Death, no doubt, had taken place instantaneously. Dr. Hall defined life, to be "the result of the pressure of arterial blood within the vascular structure of the different organs." If this pressure, or the arterial character of the blood were deficient, death ensued; if, therefore, the heart, or the lungs, ceased to act, if the blood itself failed suddenly, sudden death occurred. The medulla oblongata (not the brain), the lungs, and the heart, were, as had been expressed, the "tripod of life;" and was not the blood borne on this tripod? Life then, in a word, was arterial blood. If any part of this tripod, or the blood it supported, failed, sudden death occurred. This was true at least in animals high in the scale. Reptiles bore the loss of the heart without immediate death, perhaps without the immediate loss of sensation; the pressure and counter-pressure between the blood and the organs must be carefully maintained. If the pressure were augmented in an organ, we had apoplexy of that organ; if diminished, syncope, if so free a use of those terms might be allowed. If these morbid states took place in an extreme degree, we had death; if the arterial quality of the blood were deficient, we had death from this cause.

Such seemed to be the physiology or pathology of death; to such conditions must, he believed, all cases of sudden death be eventually traced. Before concluding, Dr. Hall referred to another case of sudden death. When a patient had laboured under obstructed bowels, when the obstruction had been overcome, and when all was hope, he had observed the patient suddenly and unexpectedly to sink. In the case of a little boy, whom he had attended, intus-susception had actually been overcome, the bowels had acted, but the powers of life sunk. On a post-mortem examination, the intus-suscepted portion of intestine was found swol-

len, and of a deep red hue, but without any actual destruction of its texture. A similar event was known to have occurred after the reduction of, or the operation for, strangulated hernia.

Saturday, November 7, 1840.

Mr. STREETER, President.

CARIES OF THE TEMPORAL BONE IN A CHILD.

The PRESIDENT placed upon the table part of the petrous portion of the left temporal bone with caries of its anterior surface. The patient from whom it was taken was a child, two years of age, and had been under the care of Mr. Hughes, of Holborn: there was puriform discharge from the left ear, which had continued for twelve months, and had been preceded by hooping-cough. Death succeeded to insensibility and convulsions. After death, the anterior face of the petrous portion of the temporal bone was found carious; there were ten or twelve ounces of water in the ventricles, flattening of the convolutions, and sero-fibrinous effusion in the pia mater and cellular tissue under the arachnoid at the base of the brain.

This was the second case of a similar kind which had occurred in the practice of Mr. Hughes during the past year. He (the President) had brought a preparation illustrative of the former case before the society, and he did so with the view of directing the attention of members to the importance of watching the discharges from the ear.*

IODIDE OF POTASSIUM IN SYPHILIS.

Mr. ROBINS detailed a case of "venereal sores," treated by mercury, and followed by secondary symptoms, which gave way under the use of sarsaparilla, iodide of potassium, and Plummer's pill. He put some questions to the society in reference to the relative value of these agents in syphilitic diseases.

Mr. WINSLOW had found the iodide of potassium of much service, both in primary and secondary syphilis.

Mr. H. JOHNSON had used the iodide of potassium in primary sores, and had not been satisfied with the results. He had found, however, that it was of much service in cases of irritable phagedænic kinds of ulceration, which were the sequelæ of syphilis, and connected with a cachectic state of the system.

Mr. RUTHERFORD ALCOCK had also little faith in the iodide of potassium as a remedy in the primary forms of syphilis. In the secondary symptoms of the disease occurring in cachectic habits, particularly in affections of the joints and periosteum, he had found it of great service. He believed that this medicine acted as a powerful and beneficent alterative.

Dr. ADDISON inquired, if any member had seen the dingy papular eruption, generally considered as a secondary symptom of syphilis in any case in which that poison had not entered into the system. He had always found it to be the result of such a poison.

Mr. H. JOHNSON had seen it in many cases, in which he firmly believed that it was the result of mercury alone.

THE DISCUSSION ON THE CAUSES OF SUDDEN DEATH WAS RESUMED BY

Mr. SNOW, who said, that death, in the ordinary acceptation of the term, consisted in the stoppage of the respiration and circulation, and was consequently merely a state of suspended animation, as there was a molecular or vegetative life which continued for some time afterwards. Syncope seemed to commence sometimes in the heart and sometimes in the nervous centres. Whilst bleeding a patient freely, there was sometimes no alteration in the pulse until the moment the patient fainted; at other times, the heart acted more and more feebly from the loss of its natural stimulus, until, probably, the blood was not sent to the brain with sufficient force to maintain its functions, and suddenly an influence was communicated to the heart which stopped its action. Extensive loss of blood might cause death at once; and sometimes, when not immediately fatal, sudden death would take place, perhaps on change of posture. The contra-stimulant medicines produced similar effects; for instance, digitalis, belladonna, lead, oxalic acid, &c., might, in a large dose, cause death at once, or by repeated smaller doses the action of the heart might be so lowered, as to render a patient liable to sudden and fatal syncope. Sudden death took place occasionally in scurvy, chlorosis, and other diseases of great debility. Malaria and the poison of contagious diseases, which were likewise sedative or contra-stimulant agents, sometimes caused sudden death without developing their peculiar effects. After these considerations there could be no doubt but sudden death might take place when there was no organic disease; and he related a case in which no alteration of structure was found. He could not agree with the author of the paper, that in asphyxia the action of the heart was stopped through the medium of the brain: true, it was mechanically stopped by the accumulation of blood which could not pass through the lungs, but it retained its contractility; and hence the occasional success of artificial respiration after sensibility was extinct; for when those chemical changes

* LANCET, p. 238, vol. ii., 1839-40.

were again set up in the lungs which enabled the blood to pass, the heart being relieved of its load, again began to act. He thought that artificial respiration ought to be tried in children just dead from convulsions,—in cases of narcotic poisoning,—and, in fact, all cases of asphyxia, where there was not disease that was incompatible with life; and he considered that the proper method of instituting artificial respiration, was that which had been laid before the society by Mr. Read, namely, to exhaust the lungs, when, by the mechanical resiliency of the ribs and respiratory muscles, the lungs became refilled by the atmospheric pressure, in the manner of natural respiration.

Dr. G. Bird referred to the cases of sudden death dependent upon air in the vessels of the brain, as related by the author of the paper, on the authority of Morgagni, and stated, that in the three cases detailed by the eminent pathologist, as those in which he supposed this phenomenon had occurred, there were ample sources of fallacy. In all of the cases the body was more or less advanced in putrefaction. In the first case, in which an Ethiopian had died whilst blowing a trumpet, there was serous effusion in the ventricles, and fluid at the base of the brain. In the second instance, the patient, a fisherman, had a gangrenous hernial cyst; and the third patient had a large flabby heart with an adherent pericardium. Here, then, in all the cases there was sufficient disease to account for death, independent of air in the vessels of the brain. Dr. Bird related a case of sudden death from digitalis, in which a woman, whilst taking this medicine in an hospital, had been forgotten for a short time, and was found dead in her bed. He had never seen a case of sudden death in chlorosis. How did we account for sudden death in cases where there was no organic disease present? Was it possible that a sudden mental shock might produce an instantaneous effect upon the medulla oblongata, by which respiration would be suspended and death ensue? Or did the mental emotion arrest the heart's action, and so produce a fatal termination? He related two cases showing the effects of mental shock on two women. In one, death ensued instantly; in the other, paraplegia of the lower extremities occurred, and was removed by the usual remedies.

Dr. Guy referred to the case of sudden death which occurred in the house of Dr. Turnbull, whilst a boy was having air injected into the ear. In this case there was blood effused on the surface of the brain, between the pia mater and dura mater. It appeared difficult to decide in this case, whether death resulted from the operation which the patient was undergoing, or whether it was dependent upon the great muscular exertion which he had taken a few minutes before sitting down. It might in this instance have arisen from both causes. Some of the difficulty, however, would be cleared away, if it could be decided whether or no the boy could have existed half an hour without symptoms, with such an extravasation of blood as had been mentioned. It appeared on evidence that the pressure of air into his ear, on several previous occasions, had been attended with no bad results.

Mr. W. Elliott related three cases of sudden death from a mental shock, in which no structural disease could be detected. In one instance the patient was a strong athletic woman, thirty-five years of age. In the second case, the patient died on the night-stool. She had suffered some time from jaundice; a large gall-stone was found impacted in the ductus choledochus. In the third case, the patient died from the shock produced by the passage of a catheter into the bladder; he fainted, and did not recover.

Mr. Wade related a case of sudden death from extravasation of blood on the medulla oblongata; and also from simple hydrothorax.

Dr. Addison remarked, that the question of sudden death might be much simplified, by deciding what was the earliest period at which death ensued after lesion of the brain.

Mr. Rutherford Alcock: In two hundred cases of injury to the brain, from external violence, internal injury, and mental shock, had known of no instance in which death occurred under a few hours: in some cases even of very severe injury, the patient lived for weeks. He had already brought this subject before the society.*

Dr. Addison remarked, that sudden death was usually connected with some disease in the system; and though the fatal termination might appear to result from causes independent of that disease, it was probable that this was not the case. He related an instance of a young woman who died suddenly whilst labouring under scarlatina, and no lesion could be detected. He attributed, however, the fatal result in this case to the exhausted condition of the muscle of the heart which had been produced by the disease. He animadverted strongly on the prejudice which existed in the public mind with reference to the necessity of venesection in all cases in which persons became suddenly affected in the streets, and expressed his opinion that many had been lost from blood-letting having been resorted to under such circumstances.

Mr. Johnson remarked, that Dr. Abercrombie had stated in his work on "Diseases of the Brain," that he had only seen one case of apoplexy which was suddenly fatal.

The discussion was adjourned.

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* Lancet, p. 929, vol. i., 1839-40.

Saturday, November 14, 1840.

Mr. GREGORY SMITH, President.

CARCINOMA OF THE CLITORIS.

A morbid specimen was placed upon the table, consisting of the external parts of generation, the uterus and appendages, of a lady, about forty-five years of age, who had died from what had been considered carcinoma of the clitoris. The disease first came under the observation of the medical attendant in February last. On examination he discovered that the clitoris was much enlarged, hard, very sensible, and partly blocking up the vagina. Ulceration soon began to exhibit itself at the extremity of the clitoris, which soon became destroyed. The ulceration spread quickly to the nymphæ, and eventually quite to the ossa pubis. The patient sunk from the effect of this disease upon the system. The internal organs were healthy: the uterus and appendages were also free from disease. The treatment latterly had been merely palliative. On one occasion she had employed a strong solution of opium as a local application to the part; this caused retention of urine and constipation for two days.

NEW MODE OF TREATING VESICO-VAGINAL FISTULÆ.

Dr. REID exhibited an instrument which he had employed with success in cases of vesico-vaginal fistulæ. The apparatus consists simply of an India-rubber bottle, to the neck of which is attached a stop-cock and a condensing syringe. The bottle is introduced into the vagina in a collapsed state; it is partly filled with air by its own elasticity; its size is afterwards increased to any extent which is necessary by the use of the syringe: by this means the aperture was so entirely filled up, that no urine could possibly escape, provided the bottle were air-tight. By the employment of this means, Dr. Reid had succeeded in curing one case of vesico-vaginal fistula, which had existed for six years; and in another case of some standing, the aperture was so much diminished that a cure would, no doubt, be effected. The bottle he had frequently, also, employed as a common pessary, and had found it of much service. It required to be removed at night for the purpose of being cleansed.

He had thought for some time that this mode of treating vesico-vaginal fistula had never been employed previous to the time he first commenced its use; but his attention had been lately directed to an article in the 6th volume of the "Medico-Chirurgical Transactions," by Mr. Barnes, of the Exeter Hospital. This gentleman, it appeared, had so long ago as 1815, succeeded in curing a case of the fistula in question, by keeping a common India-rubber bottle, with a piece of sponge sewn on the part which was to come in contact with the fistulous opening, constantly in the vagina. In this case, however, the inconveniences were great and discouraging. Thus it was stated, that whenever the bladder required to be evacuated, the sponge had to be depressed with the finger; and if the catheter were not employed every two hours, the urine dribbled through the opening. With the use of the simple apparatus, which he (Dr. Reid) had that evening exhibited, these inconveniences were all avoided.*

THE DISCUSSION ON SUDDEN DEATH WAS RESUMED BY

Mr. BRUNSGILL, who thought it was of the greatest importance to first define in what life consisted. He thought it probable that electricity had much to do with the matter, and considered that the respiratory apparatus might be considered to give off positive, and the stomach negative, electricity.

Dr. REID referred to sudden deaths occurring on the operating table, and mentioned a case of the kind which happened to Dupuytren. This eminent surgeon was removing a small tumour from the scapula of a young woman, when she fell back and expired. Death was attributed to the ingress of air into the circulation, stopping the heart's action. Mr. John Bell had detailed a similar case. Dr. Reid doubted whether this explanation of the mode of death was correct.

Mr. GREGORY SMITH detailed a case of sudden death in an infant four days old, arising apparently from the pressure of the bandage usually applied to young children on the chest, and the distention of the stomach from recent sucking. There was no sign of any convulsion having occurred.

Dr. A. T. THOMSON detailed a case in which animation was suspended in a young lady of seventeen years of age, from tight lacing. She was sitting at dinner, and had just taken some soup, when she fell back lifeless. She was restored by cutting open the stays, which separated with a very loud noise. Dr. Thomson referred to the valuable series of reports which were issued from the General Registry-office, and thought that the great number of sudden deaths registered as occurring from apoplexy, had arisen from errors in those persons who delivered the reports to the various registrars. He thought this subject did not receive due investigation.

Dr. STEWART related some cases of sudden death, depending entirely on change of posture, in persons who had been long bedridden.

Mr. WADE had seen several cases of sudden death from the impaction of a foreign body in the trachea.

* The instrument exhibited was made by Weedon, of Hart-street, Bloomsbury.

Mr. Streeter had seen young children die suddenly in bed from spasm of the glottis. He could not understand how in Mr. Smith's case death was produced, except from this cause. He had seen cases similar to that related by Dr. Thomson. Removing the busk of the stays generally afforded some relief.

Dr. Chowne made some remarks on the difficulties which were thrown in the way of arriving at the exact cause of sudden death, by the coroner's court. In cases even where post-mortem examinations were ordered, they were generally at so late a period as to render the case obscure. He thought that our knowledge of the causes of sudden death, and medical science generally, was obstructed by this mode of proceeding.

Mr. Winslow rose at a late hour to reply; he briefly recapitulated the observations which had been made on his paper, and referred to the remarks of Dr. Thomson, in regard to the errors which had occurred in registering the causes of sudden death. It was probable that many cases, supposed to be apoplexy, were not really so. Out of 22,452 cases of sudden death occurring in Milan, only 875 were from apoplexy. The majority of these were males, and during the winter months. Mr. Winslow then related some cases of sudden death from drinking soda-water, from the spontaneous generation of gases in the blood, and from gluttony. He agreed in thinking with Mr. Farr, in his admirable letter to the Registrar-general, that many sudden deaths occurred from the employment of concentrated poisons, which are attributed to other causes.

MEDICAL SOCIETY OF LONDON.

Monday, Nov. 9, 1840.

Mr. Kingdon, President.

Reflections on the Assertion of Dr. Baillie, that Disorganisation of the Brain is commonly found in an Inverse Ratio to the Severity of the Symptoms.

Mr. Dendy read a paper with the above title, and stated, that in reflecting on this assertion of Dr. Baillie, he had been struck with two prominent circumstances regarding the pathology of the encephalon, viz., the insidiousness with which fatal disease crept on, not recognised often until the latest moment, sometimes not even until dissection discovered it; and the comparative impunity with which the brain bears lesions of the most extensive nature.

These truths were seemingly opposed, but if analysed, they would be found intimately associated.

The universality of unpleasant feelings in the head had led not only patients, but even physicians, to disregard too much these sensations; but if we reflected on the premonitory symptoms of the most severe diseases, we should find cephalalgia to be almost invariably the first thing complained of.

In the metropolis and large towns this was especially the case; where, even among the lower grades of society, so much time was occupied in thinking, while the lungs were inhaling anything but pure atmospheric air.

It had often appeared to him astonishing, that they who were so cautious in avoiding fatigue of body, should be so utterly regardless of fatigue of mind; that they should be so over careful about the digestive, respiratory, and circulating powers, and forget the organ by which these powers were excited and regulated,—the brain.

What was the remote cause of the depression and the heart-diseases of London,—indeed, almost the whole of the class neuroses with which we were surrounded,—but anxiety and fatigue in professional and mercantile avocations; and yet day after day we saw men exhausting their intellectual energies, yet resting satisfied that there was no great harm in the effect, because it was only headach.

Not only, however, in functional disorders, but in the most extensive organic lesions, did we see this; when, from the peculiar sympathy existing between the brain and other organs, the whole train of symptoms has been referred to parts most remote from the nervous centre. Thus constipation or diarrhœa would be a frequent consequence of subacute meningitis, making, by its seeming urgency, the primary disease. In some cases of hernia cerebri, also, the secretions had been almost entirely suspended. The peculiarities of cerebral pathology would soon unfold, as the reason of this apparent anomaly. We should find that it was not the extent of lesion, but the intimate seat and nature of the injury. Thus morbid changes of structure in the medulla, of the nerves of sense or of organic life, or the slightest pressure, as that of an hydatid on the neurilema, would often induce a degree of derangement which should interrupt and suspend, if not entirely destroy, their function.

On the contrary, the deepest wound might be inflicted on the cerebrum, nay, it might suffer an extensive loss of its substance, and yet the symptoms should be so slight as to create little alarm, and the patient should speedily recover. Again, the brain would endure a voluminous encroachment on its substance if the growth were gradual, while one sudden blow would destroy life in a moment, by annihilating the influence by which the heart and respiratory muscles were excited; somewhat like that state of paralysis that was produced by even a slight switch on the tail of the eel and ophidian reptiles. The cause of this might be the great balancing power of the cerebral circulation, without which the incompressibility of

its proper substance would subject it to constant injury. When chronic tumours or cysts were formed gradually in the brain, it might be those of an arrested tubercle or an apoplectic clot, the result of very slow oozing; or in hydrocephalus, the quantity of cerebral blood would, he believed, be diminished in proportion to the extent of the encroachment. He remembered a case related by a former fellow of the society illustrative of this point, in which, from the application of the trephine on the skull of a sheep, some limpid fluid escaped, and the brain was seen collapsed on the base of the cranium. In a very short time this expanded and filled the cranial cavity, merely by the rushing of blood into those vessels from which it had been displaced by the effusion of serum. That tubercles might obtain a very great size unsuspected, he had had very frequent opportunities of witnessing; and Guersent and Murdoch, especially, had recorded cases of children who appeared in the fullest state of health three days only previous to dissolution, in whom extensive tubercles were found imbedded in the cerebrum. It would be remembered also, that the brain was a double organ, and as in the lung and the kidney, the integrity of one hemisphere might suffice for the fair performance of its proper function.

In other instances, although most acute symptoms of paralysis or spasm might be present, we were struck with the comparatively slight derangement both in the apparent enjoyment of life, and the state of the general health, even on the eve of a fatal termination.

During the summer of 1839, Mr. Dendy was requested to visit a young lady, about seven years old, residing on the banks of the Thames, about six miles from town. She had been for many months, and was still under the care of a very intelligent surgeon, and had been occasionally seen by, he thought, three physicians of the metropolis. He found her in a state of almost complete amaurosis in both eyes; the pupils, however, were obedient to the light, which was not uncommon, as the optic nerve might be compressed, while the lenticular ganglion which sent fibres to the ciliary ligament and the iris was free. There was carpo-pedal spasm on one side, the thumb, however, not as in infantile convulsion, but pressed on the outside of the index finger. There was almost constant opisthotonos; she dragged her leg after her when lifted along the room, and she toppled immediately she was left to herself: the pulse varied from 90 to 100. With all these formidable symptoms, she was usually cheerful and chatty; her appetite was good, and digestion perfect, except when occasionally temporary congestion supervened, during which she became languid and silent, and lost her appetite.

It was evident from the symptoms, that there was pressure, solid or fluid, about the optic thalami and the pons Varolii, and he concluded that there was effusion into the infundibulum and the fourth ventricle, pressing before and behind, and that this fluid might be constantly absorbed and re-effused, accounting thus for the remission of symptoms; he was aware, however, that this remission often occurred during the progressive growth of a tubercle. At this time Dr. Bright was joined with them one evening in consultation, and they perfectly agreed as to the locality of the disease, but he inclined to the opinion of tubercular development. The young lady lingered on in this variable state of depression and excitement,—of suffering and enjoyment,—until winter, when acute convulsions came on, and she died. The head was opened, and they found extensive turgescence of membranes—on the optic tract an hydatid the size of a pea—on the corpora striata and thalami a large fibrous tumour pressing on the optic nerve, which was softened, and on the tuber annulare, in which was a cyst containing half an ounce of fluid. The ventricles were much distended with fluid, and their ceiling was merely a thin fold of cerebrum, the septum lucidum being much thickened. The tumour, however, nearly filled the left ventricle; while fluid, which exceeded a pint, was almost entirely contained in the right, extending down, however, into the infundibulum, as well as into the third and fourth ventricles.

The experiments of Flourens, Le Gallois, and Magendie, had proved to what extent the brains of pigeons, rabbits, and other creatures, might be sliced; and accidents offered us analogies in the human subject, in which a mass of brain might be even lost, and yet no very formidable symptoms should supervene, and the patient soon become convalescent. A man was under his (Mr. Dendy's) care, who had been pushed from one of the bridges into the Thames. His skull was fractured in the fall, and when he was called to him, he was in a state of suspended animation from submersion; in fact, he was apparently drowned. After restoring this suspended vitality, he removed a small basin-full of the anterior lobe of the cerebrum, and the patient seemed to rally. He survived fifteen days with slight progressive improvement; digestion was not impaired, he had sensation, and possessed a power to move, but the faculty of memory, and that of correct association, were lost. The prognosis was somewhat flattering; when, after conversing with placidity one evening, he suddenly expired. Copious venous hæmorrhage having occurred from ulceration into the longitudinal sinus.

The child which the members had seen that evening* was another evidence of the

* A child was exhibited to the members.

extent to which gradual disorganisation of distention of the membranes of the brain might occur, compatible with a quiet existence. Many months before, in consequence of the indications of compression of the brain, and of the extreme danger in which the infant then was, he punctured the dura mater with a very small trochar, and drew off three ounces of limpid fluid. The acute symptoms yielded. About ten days afterwards he again operated, and removed ten ounces. No tendency to syncope appearing, although the cranial bones were loose, and folded over each other. From this period the child rallied, and recovered from the state of extreme prostration and emaciation in which it then was to its present condition. The study of these cases,—and he might add, other operations on medullary membranes,—was most interesting, and indeed perplexing to those who had not reflected on the peculiarities of cerebral pathology to which he had alluded. The derangement of the medulla, nerves, vessels and membranes of the brain, in these cases, was extreme; and it was indeed wonderful that vitality was preserved, until we remembered the experiments of Le Gallois, which proved that respiration did not depend on the whole of the encephalon, but merely a small part of the medulla oblongata, about the origin of the pneumogastric nerves; and that an acephalous fœtus, even in which there was a bulb of the spinal marrow projecting into the cranium from its canal, had been known to survive four days.

The moral question as to the propriety of operating on these melancholy cases of hydrocephalus formed no part of a surgeon's consideration, for it was our duty to attempt the prolongation of life under any circumstances. The result of these operations was not, he confessed, flattering, although life was almost invariably prolonged by them; and in some cases time was gained by which the brain became accustomed to its derangement, and recovery within certain limits and with certain deficiencies took place. The chief object, however, of his imperfect paper had been to engage more attention to cerebral symptomatology, and to prompt us to look with jealousy on all protracted complainings of uneasiness in the head, although there might not be, at the time, any material disturbance of the vital functions. A discussion of some length followed, chiefly in relation to the anatomical and pathological characters of hydrocephalus, which, for want of space, we cannot give this week.

Monday, November 16, 1840.

Mr. KINGDON, President.

The society was occupied this evening with discussing two points in Mr. Dendy's paper, viz., the seat of the effusion in hydrocephalus, and the question of the propriety or non-propriety of paracentesis in this disease. It would appear, from the observation of the various members, that the collection of fluid might be formed in four distinct situations: in the ventricles; between the pia mater and the brain; in the shut sac of the arachnoid, and between the arachnoid and dura mater. As to the propriety of operating, experience had proved that an ultimate *cure* was not to be expected; life, however, was prolonged, and time given for the employment of means to restore healthy action. As to the moral view of the subject, this the surgeon was not to consider; his object was to prolong life, and therefore if he could effect this by the operation he was bound to perform it.

We hope, hereafter, to have space to give the proceedings in detail.

ROYAL MEDICO-BOTANICAL SOCIETY.

Wednesday, Nov. 11, 1840.

Mr. ILIFF, President.

THE first meeting of the session was held this evening.—Dr. A. Farre made some observations on various plants lately received by the society from Dr. Forbes, of Cuba. One of these, the bark of the root of the pomegranite, was used as an anthelmintic by the natives; buti is administration was attended with danger. Some "physic nuts," which had been sent, very much resembled the seeds of the jatropha cureas; an account of which we gave in THE LANCET three years since.—Dr. Sigmond afterwards made an admirable address on the objects for which the society had been established. He took occasion, in the course of his observations, to animadvert on the mode in which botany was at present taught in the schools of medicine, and on the plan of examination pursued by the corporations in reference to this science. He contended that the really useful and practical objects of botany were merged in an inordinate desire of establishing a minute classification; and expressed an opinion that medical botany, in particular, sustained a serious injury in consequence.—Earl Stanhope was prevented from taking the chair by a domestic calamity.

VETERINARY PRIZE MEDALS.

IN our report of the distribution of the prizes at the anniversary meeting of the Veterinary Association of last week, we stated that the medal for the second best essay on the "anatomy, physiology, and pathology of the teeth," was awarded to Mr. Lytt. We have since been informed, that this essay is to be regarded as second only in the order of distribution, the two essayists, Mr. Hughes and Mr. Lytt, having been adjudged equal in merit by their examiners.

THE LANCET.

London, Saturday, November 21, 1840.

A REMARKABLE example of the bad administration of the Lying-in Charities, Hospitals, and Workhouses of the Metropolis, has lately occurred, to which we take this opportunity of directing attention. The majority of these institutions require "recommendations," or orders; but profess, in cases of accident or emergency, to admit patients without any such vexatious preliminary. In appealing to the public, the facility of admission is always one of the claims for support put forward, either in begging letters or in charity sermons; but when the subject is examined closely, it is found that there is no adequate provision either for the discrimination or reception of urgent cases, and the experience of every week discloses some new instance of suffering arising from the blameable neglect. We have frequently insisted, that at every hospital there should be an able, talented, experienced medical officer resident on the spot, and ready, at all times, to administer relief to the sick in the establishment; or to those cases of sudden emergency, which the hospitals and charities have been especially established to succour. Instead of this, the matrons—hard-hearted, careless officers—or raw house-surgeons, who have purchased the post from the medical men, and have given no other proof of their fitness—are too often left in charge, and made the exclusive umpires of the lives of those unfortunate creatures who may be driven to seek a refuge within the walls. In one of these characters, we fear, we have to introduce Mr. ARTHUR TAWKE, and certain other gentlemen connected with public institutions, to our readers.

The inquiry in question was conducted by Sir EDMUND HEAD, and the witnesses were examined upon oath.

Mr. ARTHUR TAWKE having been sworn, said:—

I am one of the *house-surgeons* to the *Lying-in Hospital* in the *York-road, Lambeth.* On the evening of Sunday, the 19th of October, at about twenty minutes past four o'clock, a female was brought to the door in a cab; the servant who was in attendance went to the door, and then came in and informed Mrs. Arnold, the matron, and myself, *that a female was at the door in labour, but that she had no letter of admission, upon which we told her she must be sent to the workhouse. I afterwards went to the door and saw the female,* and, to make myself certain, asked her whether she had a letter; finding from her answer that she had not, *I ordered her to go to the workhouse!*

Commissioner: Then you did not examine into her state?

Witness: No, I did not.

Commissioner: Did the woman appear to be in pain?

Witness: Not that I observed.

Commissioner: Had she been in labour, would she have been admitted?

Witness: THAT QUESTION I CAN HARDLY ANSWER!

Mr. TAWKE was told, by the nurse of the hospital, that the poor woman in the cab, whose name was GRIFFIN, was in labour; but into that circumstance—the stage of the labour, or the state of the patient—he did not consider it his duty to inquire. He went to the door and *saw* the female, to make himself "certain" whether she had a *letter*; and upon finding that she had no letter, "*ordered* her to go to the workhouse."

While this dialogue was going on, GRIFFIN was leaning on the window of the cab, earnestly begging for admission into the lying-in *charity.* In the words of the nurse, she appeared in great pain; she said she was very ill; she spoke as if she were in pain; and said—"Oh, pray, do let me come in!" A new-born child was lying at her feet. In that stage of delivery, the deplorable mother was ordered to the workhouse from the door of the lying-in hospital, because she had no letter. Could her tears, prayers, and blood not be read by Mr. TAWKE? or had office, in a charity, made him insensible to the agonies of a mother?

A guardian understood from Mrs. ARNOLD, the matron, that the woman was *not then in labour;* had she been so, she (Mrs. ARNOLD)

would have admitted her without a letter, *it being a case of urgent necessity*. How this can be reconciled with Mr. TAWKE'S evidence, we do not pretend to discover. Mr. TAWKE knew she was in labour; he saw her, and may have suspected what she had not courage to utter in the presence of so many. It was his duty, at any rate, to inquire, under the circumstances, If cases of urgent necessity are ever received at this *charity*, to which the respectable names of Dr. LOCOCK, Dr. LEE, and others are attached?

When the "female" was ordered to the workhouse, the honest cabman, who had not had the advantage of a charity, or workhouse education, exclaimed, "It is a d—d shame," immediately got upon the box, and drove off.

The cabman had taken up the patient in New Compton-street, Soho, a little before four o'clock, and had previously driven her, as directed, to the Westminster Hospital. She was standing by the door in Compton-street, and did not appear so ill as she did after she got into the cab. He saw a man and woman at the Westminster Hospital, who came out and spoke to the female. The man, one of the medical students he believed, told him to drive her to Queen-square (probably mistaken for Queen-street), where there was an institution for pregnant women. The woman said she was delivered *before* she reached the Westminster Hospital; but that was not discovered, and if it had she would probably have been refused admission, in compliance with the strict letter of the regulations in force in all the London hospitals, we believe, except Guy's.

After having been driven from the *Westminster Hospital* and the York-road *Lying-in Charity*, the cabman carried his freight to the *Lambeth Workhouse*, under the administration of the Poor-law Commissioners. Mrs. FRANKS, the matron, was called; she asked the cabman where he brought the female from, and to what parish she belonged; and, on learning that she had last lived in the parish of St. Anne, said, that she could not be taken in, as she did not belong to Lambeth parish. "GRIFFIN then "begged very hard to be taken in, and Mrs. "FRANKS again said she could not be taken "in, as *they could not have any further incum-"brance*." This is interesting, as it shows what interpretation the officers, who can be dismissed at any time by the Poor-law Commissioners, have hitherto been directed to put upon the "rule" of the board, that paupers may be received into the workhouse by the master "without any order, in *case of any sudden or "urgent necessity*." The urgency of this necessity will not be disputed. But it may have happened that Mrs. FRANKS misunderstood the rule; this was speedily put to the test by the cabman, who jumped again upon the box, and drove, as directed by Mrs. FRANKS, to another of the new Poor-law workhouses, St. James's, in Poland-street, where she was also denied admission, "in a very kind manner," by the porter, and directed to the Strand Union workhouse, in Portugal-street. By mistake he took her to the hospital—the King's College Hospital—and applied for her admission there, but was refused. The cabman was tired; and, having asked a policeman what he had better do, was advised to take her to the station-house in Bow-street; where he saw the inspector on duty, who immediately dispatched a constable with the cab to St. Giles's workhouse, with directions that the female should be instantly admitted, which was done. The mother's life was saved; *the child was dead*. What with the charity of hospitals, and the humane administration of the workhouses of the metropolis, GOD knows what would become of the poor, in cases of emergency and urgent necessity, if it were not for the police and the station-houses!

The girl herself had but a dim, bewildered recollection of the dreadful scene through which she had passed. But her evidence exhibits her state of mind:—

ANN Griffin was then sworn, and said: I got into a cab on Sunday, the 19th of Octo-

ber. It was about three o'clock in the afternoon; I told the man to drive to Gerrard-street. I was then driven to the Westminster Hospital. My mistress (alluding to the person she formerly lived with in Gerrard-street) told me to go there. I asked for admittance, but was refused.

Commissioner: Where did you go to thence?

Witness: I cannot recollect.

Commissioner: Do you recollect going to the Lying-in Hospital over Westminster-bridge?

Witness: I was taken there, but they would not admit me. I do not know why.

Commissioner: Who told you so?

Witness: A man.

Commissioner: Did any female speak to you?

Witness: Not that I recollect. I think I was then taken to Queen-square.

Commissioner: Are you sure you were taken to Queen-square after going to the Lying-in Hospital?

Witness: I think so.

Commissioner: Do you recollect coming to this house (Lambeth workhouse)?

Witness: Yes.

Commissioner: Whom did you see?

Witness: I think the only person I spoke to was a woman. I told her I was very ill, and about to be confined.

Commissioner: You are quite sure of that?

Witness: Yes; *I begged very hard to be taken in, but she said she could not take me in; she could not have any more incumbrance.* She said so to the best of my recollection. I believe the matron asked the cabman as to my residence.

Commissioner: Where did you then go?

Witness: I believe I was taken to a place near Soho-square, where I saw a man, who said he could not take me in.

Commissioner: Did you tell him you were about to be confined?

Witness: Yes, I did.

Commissioner: What is the next thing you recollect?

Witness: I think that was the last place I was taken to before I went to Bow-street station-house, and from Bow-street I was taken to St. Giles's workhouse, where I was admitted.

Commissioner: Have you any objection to say where you were delivered of the child?

Witness: The child was born before I got to the Westminster Hospital.

Commissioner: You are sure you were delivered before you got to the Lying-in-Hospital, or this place?

Witness: I am sure of it.

Commissioner: Where was the matron of the workhouse when she spoke to you?

Witness: She was standing at the door, some distance from me.

By Mrs. Franks: What passed when I came to the door?

Witness: As far as I can recollect, you said that you could not take me in, and that you could not have any further incumbrance.

Mrs. Franks: Were you sitting or standing?

Witness: I was standing up in the cab, leaning upon the door.

Mrs. Franks: Then nothing more passed between us?

Witness: Nothing more that I recollect.

Commissioner: Did you tell any person, at any place you applied at, that the child had already been born?

Witness: No. I did not mention it even to the cabman. I merely said that I was in labour.

By a Guardian: The matron did not come to the cab, but spoke to me at a distance. I do not know where the cabman was at the time, but believe he was by the side of the cab.

Commissioner: Did you get out of the cab at all?

Witness: Not till I arrived at St. Giles's workhouse.

The following then is an authentic list of the metropolitan institutions at which admission was refused to a poor woman just delivered of a child in a cab, with the after-birth probably remaining.

She was refused admission at,—

The Westminster Hospital!

The General Lying-in-Hospital, York-road, Lambeth, founded 1765, *incorporated* 1830!

The Lambeth Union Workhouse!

The St. James's Workhouse, both regulated by the Poor-law Commissioners!

The King's College Hospital!

She was attended to instantly at,—

The Police station-house, Bow-street.

This disgraceful transaction, which could scarcely have occurred among savages, will, we hope, direct the attention of the governors of hospitals and lying-in charities to the subject we have before mentioned; and induce them to appoint resident medical officers, with adequate salaries; to secure the services of men of high character and of first-rate abilities, so that a much greater latitude may be given for the admission of patients; and the urgency of the case be looked at more than Mr. Tawke's trumpery "letters."

BRITISH MEDICAL ASSOCIATION.

Exeter Hall, November 17, 1840.

Dr. WEBSTER, President, in the chair.

THE minutes of the last meeting were read and confirmed.

The following gentlemen were admitted members of the Association, having first been duly proposed and seconded:—

Arthur Brisley Rye, Esq., Banbury, Oxon.
M. Lynch, Esq., M.D., Newcastle-on-Tyne.
R. J. Peck, Esq., Newmarket.
J. H. Nankevill, Esq., St. Columb, Cornwall.

A letter was read from J. Edmunds, Esq., Kinneton, Warwickshire, on the subscriptions to the Benevolent Fund, which the secretary was directed to answer.

A letter was read from Mr. Liston resigning his seat in the council, to which the secretary was directed to reply.

A communication was read from the secretary of the Cornwall Medical Association (J. H. Nankevill, Esq.), inclosing a printed circular of the principles (very similar to those advocated by the British Medical Association) on which the society is founded, and its objects, and requesting any information, on certain points, from the British Medical Association which might be of service to them, to which the President offered to reply.

The following communications were next read, and ordered to be printed:—

Rutland-square, Dublin, Nov. 4, 1840.

Sir:—I just received, on my return from the continent, your letter, containing a resolution of the council of the British Medical Association very flattering to me. I beg you will take the earliest opportunity of expressing my thanks to that highly respectable body for the honour they have conferred upon me, in enrolling my name amongst their honorary members. I have the honour to be, Sir, your obedient servant,

(Signed) RICHARD CARMICHAEL.

To C. H. Rogers Harrisson, Esq., &c.

7, Portland-street, Southampton, Nov. 11, 1840.

Sir:—I had hoped to have been in London before the present time, when I should have had an opportunity of thanking in person the British Medical Association, for the honour conferred on me by enrolling me as an honorary member of that society. I beg you to assure them of the pleasure I feel in being connected with a body of men who have taken so active and distinguished a part in medical reform, and to present to the association my grateful acknowledgments for the honorary title they have been induced to concede to me. I have the honour to be, your very obliged servant,

(Signed) JAMES MACARTNEY.

To C. H. Rogers Harrisson, Esq., &c.

Worcester, Nov. 9, 1840.

Sir:—I have delayed replying to your letter, requesting that the Provincial Medical and Surgical Association would appoint delegates to watch the progress of the question of medical reform during the ensuing session of Parliament, because the association has not hitherto come to any decision upon that point; when that event occurs, I will take care to communicate the result to you.

Allow me to take this opportunity to thank the British Medical Association, for the distinction conferred upon me by electing me a corresponding member of the society. I have the honour to be, Sir, your faithful servant,

(Signed) CHARLES HASTINGS.

To C. H. Rogers Harrisson, Esq., &c.

167, George-st., Glasgow, Nov. 14.

Sir:—Your esteemed favour of the 6th inst., inclosing a resolution of the British Medical Association, recommending each association to send a delegate to London during next session of Parliament, has been laid before the council of the Glasgow Medical Association, and I am instructed by that body to intimate that they regret their inability to comply with the request of the parent body; at the same time, they will not relax their exertions in co-operating with them as heretofore. I have the honour to be, Sir, your very obedient servant,

(Signed) GEORGE MILLER, Sec.

To C. H. Rogers Harrisson, Esq., &c.

Newcastle-on-Tyne, Nov. 12, 1840.

Sir:—Your letter, relative to the appointment of delegates by the different medical associations, was laid before the council of the North of England Medical Association, at their meeting yesterday, when it was resolved unanimously, on the motion of Sir John Fife, of Newcastle, seconded by Dr. Brown, of Sunderland:—

"That the council do authorise their secretary to proceed to London as a delegate from this association, appointed to co-operate with the representatives of other medical associations of the United Kingdom, in promoting the advancement of medical legislation during the next session of Parliament."* I remain, Sir, your obedient servant,

(Signed) CHARLES T. CARTER.

To C. H. Rogers Harrisson, Esq., &c.

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* The remaining portion of the communication from Mr. Carter, alluded to the time of the delegates' meeting in London, as also the influential persons in both houses of Parliament, with whom interviews would be desirable.

A communication was read from Dr. Granville, which the secretary was directed to answer.

The council then proceeded to the consideration of Mr. Hawes' "Draft of A Medical Bill," clause by clause, as far as the eighth, when the meeting adjourned until Tuesday next, the 24th inst., to continue the discussion on the remaining clauses.

UNIVERSITY OF LONDON.

SECOND EXAMINATION FOR THE DEGREE OF M.B.

November, 1840.

PASS EXAMINATION.

First Division.

Philip Burnard Ayres, University College.
John Charles Bucknill, University College.
John Carey, Richmond Hospital, Dublin.
Anthony French Carpenter, School of Physic in Ireland.
Henry Cooper, University College and Middlesex Hospital.
Stephen Jennings Goodfellow, St. Bartholomew's Hospital.
Thomas O'Meara, University of France, and Mercers' Hospital, Dublin.
John Paddon, University College.
Richard Quain, University College.
William Rayner, University College.
Robert Russell Sewell, University College.
John Douglas Strang, University College.
Jonathan Mason Waddy, St. Thomas's Hospital and Webb-street.
Thomas Williams, Guy's Hospital and Webb-street.
Edwin Wing, School of Physic in Ireland.

Second Division.

Edward Goodeve, Bristol (Medical School).
Robert Hutchinson Powell, Digges-street, Dublin, and Apothecaries' Hall, Ireland.
William Tyler Smith, Bristol (Medical School).
David Unwin, University College.

MEDICAL APPOINTMENTS IN THE ARMY.

NEW CROWN WARRANT.

VICTORIA R.

WHEREAS it has been represented unto us, that the rank of assistant inspector of hospitals can be dispensed with; and that with a view to extend the means of promotion in the medical department of our army, it is expedient to institute a second class of staff surgeons, who shall, in rank and pay, correspond, and be on a footing with the regimental surgeons, and, at the same time, to improve the pay and advantages of the first or superior class of staff surgeons. We are, therefore, pleased to direct, that from and after the date of this our warrant, all former rules and orders respecting the titles, ranks, periods of service, and pay of the medical officers of our army shall cease, and determine that this our warrant shall, from and after the 1st day of October, 1840, be considered the sole and standing authority upon this subject.

1. The medical officers of the army are, in future, to be distinguished by the following ranks and commissions, viz.:—Assistant surgeon, regimental surgeon, and staff surgeon, 2nd class; staff surgeon, 1st class; deputy inspector-general of hospitals; inspector-general of hospitals.

2. ASSISTANT SURGEON.—No medical candidate, who has not passed his examinations at the Royal College of Surgeons of London, Edinburgh, or Dublin, shall be eligible for this commission; and the assistant surgeon must have served on full-pay five years, before he shall be eligible for promotion to the rank of regimental surgeon, or of staff surgeon of the 2nd class.

3. Regimental surgeons and staff surgeons of the 2nd class must have served ten years in the army on full pay before they shall be eligible for the next step of rank.

4. A staff surgeon of the 1st class must have served three years at home, or two years abroad, in this rank, before he shall be eligible for promotion.

5. A deputy inspector-general of hospitals must have served five years at home, or three years abroad, in this rank, before he shall be eligible for promotion to the highest rank of inspector-general.

6. The rates of daily pay for the before-mentioned ranks are to be in future regulated by the length of time which the officers of each class shall have served upon full pay, according to the annexed scale; provided, always, that when any officer is hereafter promoted, he shall commence upon the *minimum* pay of his new rank, notwithstanding his length of service, agreeably to the said scale, may give him a claim to a higher rate of pay, as before he shall be allowed such higher rate of pay he will be required to serve on each inferior rate of pay attached to his rank the following period: namely, one year, if he had been in the medical department antecedently to the 29th of July, 1830, and two years if he received his first medical commission subsequently to that date; but if the officer thus promoted had higher pay in his old rank than the *minimum* of his new rank, he shall commence upon that rate of pay which may be next above his former pay, and before he obtains any further increase shall serve the period above prescribed, viz.:—

RANKS.	Rates of Daily Pay subject to the above Provisions.			
	After 25 years' actual service.	After 20, but under 25, actual service.	After 10, but under 20, actual service.	Under 10 years' actual service.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Assistant Surgeon	0 10 0	0 10 0	0 10 0	0 7 6
Regimental Surgeon and Staff Surgeon, 2nd class	1 2 0	0 19 0	0 15 0	0 13 0
Staff Surgeon, 1st class	1 4 0	1 2 0	0 19 0	—
Deputy Inspector-General of Hospitals	1 10 0	1 8 0	1 4 0	—
Inspector-General of Hospitals	2 0 0	1 18 0	1 16 0	—

7. In addition to the pay of their ranks, the officers at the head of the medical department on foreign stations shall receive allowances at the undermentioned rates when serving under the following circumstances, viz.:—

If with an army in the field of
10000 men, or upwards .. 20s. a-day.
Ditto 5000 .. 15s.
Ditto any less number 10s.
If serving in a colony where the forces consist of 1500 men, or upwards .. .. 5s.

Given at our Court, at Windsor, this 14th day of October, 1840, in the fourth year of our reign.

By Her Majesty's command,
T. B. Macaulay.

OPINIONS OF MEN

WHO ARE IGNORANT OF MEDICINE, UPON A MEDICAL OFFICE AND MEDICAL DUTIES.

Copy of an Advertisement in the "Manchester Times" *of October* 31*st*, 1840.

"At the coroner's inquest upon the bodies of Marianne Sandys and others, held at the Vernon Arms Inn, Stockport, the jury unanimously came to the following resolution:—

"At the close of a long and painful investigation, which has lasted five long days, this jury feels called upon to advert to the election of coroner which must shortly take place for the Stockport district.

"It appears to us that these cases demonstrate the necessity of appointing to that office a person conversant with criminal law, well acquainted with the law of evidence, and skilled in the examination of witnesses; and that the functions which coroners' juries in these and other cases have to discharge, can only be executed with satisfaction to themselves and advantage to the public, when their deliberations are presided over, and their investigations into the facts of the cases assisted, by a coroner possessing these qualifications.

"The jury are also decidedly of opinion that a practising medical man is wholly unfit and ineligible for the office, not only from his want of the qualifications above stated, but from the nature of his avocations, and his liability to be called upon, for instance, in midwifery cases, very suddenly, and it might happen at a time when (if filling the office of coroner) he is holding an inquest, to execute his proper professional avocations, when, it is manifest, he must neglect his duty either in the one case or the other."

J. Dakin, Foreman.	John Barrington.
Beeby Hodgson.	John Fletcher.
William Webb.	Daniel Barrow.
John Kitchen.	Thomas Wilkinson.
George Yates.	John Shawcross.
Edward Etchells.	T. Shuttleworth.

"Dated at Stockport, this 28th day of October, 1840."

To the Editor of The Lancet.

Sir:—In the last number of the *Manchester Times* newspaper is printed a singular document, in the form of an advertisement, from the jury of a coroner's inquest, strongly recommending, just before an election, the appointment of a legal in preference to a medical coroner. It is likely, I think, to be remembered longer than the subscribers to it intended, and longer than their posterity could desire. It will certainly be preserved, and referred to in after-times as the acmé of ignorance and stupidity.

I have heard of the wise men of Greece, who gave their opinions on what they had studied; but these wise men of Stockport, acting upon an opposite principle, have furnished, in the history of human folly, a perfect novelty.

As far as I can learn, and I have made some inquiry, the latter are neither lawyers

nor medical men; and yet they presume, with amusing and unprecedented simplicity, to decide upon the relative capability of the members of both professions.

Every man of common sense knows that the case in which they were engaged depended, principally, on medical testimony; that none but a medical man was able to put the questions which could produce the entire evidence; that none but a medical man could estimate the pertinency and efficiency of the answers given; and that the mere formal technicalities of a lawyer were quite inadequate in such, and many similar cases, to attain the ends of justice, and prevent the sacrifice of public interest and private character.

Let it be remembered that a coroner's court has simply to investigate the fact; and that the matter, whatever it may be, is afterwards referred to another tribunal for a legal decision. The fact may, certainly, be best determined by those who know something respecting it; and the law can, on the same principle, be most efficiently brought to bear on the subject, by those who are skilled in that profession. It would be as absurd to ask the Lord Chancellor to give his opinion upon an intricate medical case, as it would have been to put the same question, in a complicated legal difficulty, to John Hunter.

The flippant and obtrusive document of the Stockport jury, which has all the appearance of being the production of an interested party, is a most flagrant and wanton imputation upon a most important and respectable profession; and its publication will, it is presumed, be, at some future time, lamented by every individual who has so strangely and inadvisedly attached his signature to the article.

The advertisement is reported to have been drawn up by an attorney. The jury were mere simpletons, who *did as they were directed*. I am, Sir, your very obedient servant,

AN ADVOCATE FOR A MEDICAL CORONER.

STRANGULATED INGUINAL HERNIA TREATED BY A DRUGGIST.

INQUEST ON THE BODY.

(Forwarded for publication in THE LANCET.)

GEORGE RICHARDS, of Ashcombe, labourer, aged 33, said to have been at times afflicted with hernia, was seized, during his work, on Saturday morning, at about nine A.M., October 10th, with such sudden and excruciating pain in his bowels that he could not stand up, and was taken home in a cart. A messenger was sent for Mr. W. M. Cann, surgeon, at Dawlish; but he being from home, Mr. Liddon, a druggist, at Dawlish, was subsequently sent for, and saw him in the evening; bled him, gave him medicines, ordered him poppy fomentations, &c.; and, during the two following days, continued his efforts to relieve him by enemata, warm baths, and a large blister all over the abdomen.

The man continuing to get worse, having had incessant vomiting from the first, and now of a stercoraceous character, on Monday, October 12, at four A.M., his brother went to Mr. Collyns, of Kenton, surgeon, to request his assistance. Mr. C. being engaged, and unable to attend, sent to request the man to go for some other surgeon, and he accordingly went to Dr. Tunstall, at Dawlish, who was from home; but his servant went and requested Mr. Cann to go for him, and Mr. Cann saw him on Monday evening, and ascertained that there was a hernial tumour of some size in the right groin; the man was, however, very obstinate and violent, and would not permit Mr. Cann to do anything to endeavour to reduce it. Mr. Cann, therefore, took his leave, and did not interfere.

On the following morning, being Tuesday, the 13th October, Mr. Cann was again requested to attend him, which he accordingly did, and finding him moribund, he requested to have another opinion, and Mr. Collyns being sent to, he met Mr. Cann at eight on that evening, and found the man in *articulo mortis*. Mr. Collyns, however, to satisfy himself, passed his finger into the external ring, and plainly felt the protruding intestine above, which then felt as if receding from his finger. The poor man died whilst Mr. Collyns was in the house.

Mr. Cann, with a laudable anxiety to prevent *unprofessional* and *unqualified persons* from undertaking cases of such importance, suggested the propriety of having an inquest held on the body, in which Mr. Collyns cordially concurred, and Mr. Gribble, one of the coroners for Devon, was sent to on the following Friday, Oct. 16th, the man having died on the 13th. Mr. Gribble came to Ashcombe, and summoned Mr. Cann, Mr. Liddon, and Mr. Collyns, to attend; but Mr. Liddon having learnt that an inquiry would take place, went on Thursday, the 15th, to Mr. Radley, who practises at Lenton, and got him to come over and look at the body on that day, being forty-eight hours after death.

On attending the inquest, on Friday, Mr. Cann and Mr. Collyns informed the coroner, that they could *not give satisfactory evidence* touching the death of Richards, unless they opened and examined the body; and this being ordered to be done, they accordingly prepared to do it. Here, however, an extraordinary scene was presented; the mother and wife of the deceased, assisted by some female neighbours, made a furious attack on the surgeons, attempted to throw the

instruments out at the window, and, with very menacing gestures and horrid imprecations, threatened to throw the surgeons after them. Finding it impossible to proceed, Mr. Collyns went to the coroner, in the adjoining house, and informed him what had taken place; and he having been told by the foreman of the jury, that Mr. Liddon was coming with his friend, Mr. Radley, the coroner said it would be better to wait their arrival, and proceeded to take the evidence of the wife, whom he reprimanded for her violent conduct. On the arrival of Mr. Liddon and his friend, the foreman of the jury, at the suggestion of Mr. Radley, requested the coroner to order Mr. Cann and Mr. Collyns to leave the court, which they did; and the latter was not again called as a witness, although he was prepared to swear what had occasioned the death. Mr. Liddon and his friend Mr. Radley were suffered to remain; Mr. Liddon's testimony being taken, Mr. Radley was allowed to give evidence, although he was not summoned to attend, and had not seen the case until forty-eight hours after death. Mr. Cann was then called in, and submitted to a very long examination by Mr. Radley; after which the coroner summed up, without enforcing his order for the post-mortem examination, and without calling for Mr. Collyns's evidence, who had seen the man whilst living; and the jury came to a decision, on the volunteer evidence of Mr. Radley, that the man—"*Died by the visitation of God.*"

Surely it is high time to have laws which permit all this amended.

On Thursday, October the 16th, Mr. Collyns being applied to as registrar of the district for his certificate of registry, he entered the death in the register-book as having been caused by *strangulated hernia*, on his own knowledge of the case, not knowing that the inquest would be held; and now he is required, by the information of the coroner, to enter the cause of death as "*the visitation of God.*" How can this be reconciled? Of course, neither Mr. Cann nor Mr. Collyns can know anything of the testimony given by Mr. Liddon or Mr. Radley, he not having been permitted to be present; but the latter is said, by one of the jury, to have stated that the treatment adopted by the former was most correct and judicious, and it was insinuated that the inquest was held purposely to injure Mr. Liddon; but Mr. Cann and Mr. Collyns positively deny any such intention, their object being to expose the system, not the man, whom they believe to have done as much as his limited knowledge of the case enabled him to do.

W. Moore Cann, M.R.C.S.L.
W. Collyns, M.R.C.S.L.

October 25, 1840.

PATRONAGE OF QUACKS BY MEDICAL MEN.

To the Editor of The Lancet.

Sir:—I am a member of the Royal College of Surgeons, a licentiate of the Apothecaries' Company, and, in addition to the peculiar practice which these mighty, but perfectly valueless, titles introduce me to, I am also bold enough to trade in the low and humble business of a chemist and druggist; I feel, therefore, that I am one of those very unfortunate persons who come under the ban of Mr. Dendy's severe and victimising letter in your last Number. From the peculiar and quaint style in which this gentleman's letter is written, I am very much afraid that he sets himself up as the exterminator of all who, like myself, sell pink saucers and hang out blue lights. In addition to my professional employments, I occupy myself every week with reading your pages; and I am no stranger to the persevering efforts of which you have been and still are the author, in endeavouring to exterminate from the surface of society those numerous creatures yclept "quacks." Why, Sir, can you be in ignorance that quacks are more numerous than ever; that they flourish, and thrive, and coin cash to a greater amount than at any former time? Why, the stars in heaven, and the sands beneath the sea, are small in number compared to the quacks in the streets of London. It is all very well for you, and those who think like you, to attempt to exterminate them from the face of the earth. Why, Sir, do you not know that every quack in England reads your pages, and takes especial good care to profit by them? Every chemist and druggist is to all intents and purposes a quack. They have all of them nostrums of their own. "Bilious Pills," "Family Pills," "Dinner Pills," "Friends to Females," "Corn Comforters," &c. Now, who is to withstand all this? It is very well for Mr. Dendy, who, bachelor as he is, has only himself and his housekeeper to provide for, to cry out against those who keep shops; but my wife, children, and servants, would soon become more intimate with hunger and starvation than they have ever yet been, were I to "shut up shop." No, Sir, much as I admire your logic, I cannot forsake my "order." I respect Mr. Dendy, but I respect myself still more; and I cannot consent to starve, to please either of you. You are pursuing the wrong cause, and are taking the wrong route. You will never exterminate either Holloway or Franks; they will be too much for you; they will beat you hollow; and crow and flap with delight over your unsuccessful, though well-meant, efforts to crush them. Quackery—oh, how ignorant are you, Sir, of the va-

rious masquerade shapes and forms which it assumes. You have only probed the surface; whilst you have left the darker depths of what you term this "disgraceful traffic" untouched and harmless, as far as the point of your LANCET is concerned. I knew a man (I know him now), a member of the College, and a licentiate of the Hall. He had a patient, whose phthisical cough baffled all the endeavours of this "worthy" to cure; so he took his patient to Dr. Elliotson, who ordered some pills, containing ipecacuanha and opium; these pills cured the cough, and the patient to this day remains safe and sound in health. But, Sir, mark the sequel of this case. The "member" and "licentiate" finding these pills had done his patient such service, forthwith takes a secret copy of Dr. Elliotson's prescription, and makes up a few hundred. They are forthwith inclosed with a government-stamp, and sent all over the country with a flaming paragraph, to which all the "testimonials" of Morrison, Eady, Franks, Holloway, and Solomon, are sheer foolery. The consequence of all this may be well foreseen. The "proprietor" of these pills is deriving a very sure and snug income from the sale of these pills.

Now, Sir, what will you say to all this? neither you nor any one else in the kingdom can stop this man from selling these pills; he will do it in despite of you; and the more (if you knew his name, and I assure you that you have examined him upon inquests, and your clerk has given him his fee,) you might feel disposed to "show him up," the more pills he would sell. Why, Sir, who are the extensive patronisers of quackery? the very men who ought, as the phrase goes, to uphold the honour and dignity of the profession: whose "dinner pills" are most thought of, and made up for their own private profit by every chemist and druggist in London, your very humble servant among the number. Why, those made from a prescription of Dr. Marshall Hall, who has given prescriptions for "Daffys" and "Dalbys" and "Godfreys" to all the world, so that a drop of "the real Daffy" is now a thing impossible to be got at! Why, Dr. Paris, of Dover-street, and Dr. Cowan, of Reading, who furnished every "blue-light" in England with an array of valuable prescriptions, each of them capable of being turned into a valuable nostrum by a shrewd, clever, and intelligent fellow, such as many of us are. Why, Dr. Copland, in his "Formulæ for Prescriptions," in the "Dictionary of Practical Medicine." Now, Sir, I have proved that the "aiders and abettors" of all this so-called mischief, are the aristocratic physicians of Pall-mall; but there is Dr. Collier, of Spring-gardens, who hates the Pall-mall people with a notorious and never-dying hatred, and he has published a "pharmacopœia" containing some valuable recipes of his own; and I know one chemist who works them well, and derives a very snug income from doing so.

Again, Sir, there is Mr. Langston Parker's book upon syphilis, foreign and domestic; why, here are cures for all the claps in Christendom; and do you suppose that no chemist will and does make use of them for his own especial benefit and profit? To be sure many do, and be considered very clever fellows for doing so. So that, Sir, the evil which you think to remedy and cure, you will fail to abolish and remove; I advise you to give it up—it will never do; there are men, women, and children, who are born to be gulled, taken in, and done for; and if they do not undergo all this, "faith," they do not fulfil their destiny. I have much more to say on this subject, but time now fails me, for there are "chinkling coppers" waiting to change pockets in my shop, and I must be off, after subscribing myself your very humble servant,

PINK-SAUCER-AND-BLUE-LIGHT.

P.S.—The coppers must stay where they are, whilst I just add, that I have subscribed my letter with the name by which I was christened, and that I expect your correspondent, Mr. Dendy, will immediately offer me a very humble apology through your pages for having daringly and unwarrantably "taken my name in vain!"

THE DUBLIN SCHOOL.

To the Editor of THE LANCET.

SIR:—Your correspondent "CHIRURGICUS'S" excellent remarks in your last Number, have made me look to the lists of professors in the school of the Dublin College of Surgeons. I find them plausible enough, so far as numbers go, at least in some branches of instruction; but what is my surprise to find in a royal corporation school, *no professor of botany;* and yet it is on my mind that I have seen something like a botany certificate from the professor of materia medica, Mr. Williams. Of course I might be mistaken; but I am sure you will permit any member of the Court of Censors, under whose superintendence this boasted school is, to explain whether Mr. Williams does really lecture on that subject, as it is not so announced in "the bills."

I am very glad "Chirurgicus" has begun to direct the influence of public opinion on this same school; it is the only way that he or any one else can be of any use to the public in retrieving this department of jobbery. What! *jobbery* did I say? Are not the professors, one and all, agitating members of the council of the association? Are not two of these, likewise, editors and proprietors of the reform organ in this city? Why, yes, Mr. Editor, all this is true; and

yet, I repeat, the Dublin College of Surgeons' School is a jobbery from beginning to end. For, let me ask, What business has it there at all? Why should the whole corporation—aye, the whole profession—be made subservient to a mere second-rate private school, that yields neither honour nor emolument to any one but the jobbing proprietors themselves? Or, being there, why should it not be made as decently-perfect as may be? Why should there be no professor of botany, for instance? Is botany no fit subject for surgical pupils to study? Why, *that* is another question. There is no favourite that knows enough of the subject to be jobbed in; and for anything else, the jobbers care little.

But is it not humiliating that surgery in Ireland cannot produce anything better in the shape of fruit than this same school, all imperfect and shapeless as it is? Why, look to Birmingham. Even there I see that professors on organic chemistry, and other subjects worthy of the machinery of a corporation, are appointed; but in Dublin, the second city of the empire, a right royal corporation can produce nothing more than the stunted private school of Jacob and Company. And yet the schoolmen rule the college, and the schoolmen are all reformers. I wish reform would assume the characteristic of charity, and begin at home!

When we see this job, the be-all and the end-all of these reformers (I speak of things where they are supreme, and not of words or scribbling, for these are cheap), I ask, Sir, is it any wonder that so many of us should look on these "*reformers*," *par excellence*, with suspicion and doubt, and hesitate to link ourselves to the great innovation that seems to have so little real value in it? Your obedient servant,

A REFORMER.

Dublin, Oct. 25, 1840.

OFFSPRING OF ROYALTY.

To the Editor of THE LANCET.

SIR:—It has long been the fashion in the higher circles, for ladies to commit the nurture of their infants to others; a custom which, in the majority of instances, would be more honoured in the breach than in the observance.

I have heard, with regret, that our sovereign, in accordance with regal custom, is about to elect a wet-nurse for the expected scion of royalty; six married ladies, I am told, will undergo their *accouchement* in the palace; five of whom are to return to their families, while the approved elect will remain to furnish, what a mother if physically capable, whether regal or otherwise ought to supply, nature's food to her own offspring.

It is more than probable that her Majesty's medical advisers have recommended her to suckle her child, but that court objections have been raised to obviate the performance of this duty. These court objections should be overruled. On this subject I think it more than probable that her Majesty has been correctly advised; because medical men must daily witness the benefit accruing to mother and child, the comfort, the happiness, and the delight, which every mother experiences from nursing her own offspring. Medical men well know, also, the trials that a healthy female constitution frequently endures from neglecting this duty, inasmuch as almost every year brings an increase to her family, making it doubly numerous, but with a corresponding wear and tear of the maternal constitution, a corresponding degree of suffering, and, not unfrequently, premature decay of the bodily power. I am aware that exceptions may occur (though rarely); but all medical men, and the matronly women of England well know, that the above remarks are perfectly true; and it is the bounden duty, in my humble opinion, of her Majesty's medical advisers, to make her acquainted with the facts in question.

Believing that your excellent publication is read by every member of the profession, and as her Majesty's medical advisers might think me presumptuous were I privately to address them, they have here the opportunity, if they see any force or justice in these remarks, of considering them; and if, under their sanction and recommendation, the highest personage in the land be induced to pursue a course that is worthy of a mother, the nation will soon feel the force of her example, and her Majesty a degree of happiness, which she will otherwise inevitably miss. I remain, Sir, your most obedient servant,

PARENS.

London, Nov. 10, 1840.

ST. THOMAS'S HOSPITAL.

ASSISTANT PHYSICIAN.

To the Editor of THE LANCET.

SIR:—Permit me to offer you a few remarks on the intemperate and ill-advised letter of your correspondent, M.R.C.S. I make them as brief as possible, that I may take up the less room in your valuable publication. Though a friend of Dr. Leeson's, I have not stopped to ask his permission to say a few words in his defence, because I well know him to feel averse from appearing in any controversy of the kind. Briefly, therefore, suffer me to observe, that though Dr. *Golding* may be "well known for his professional acquirements and talents" (and I can bear testimony to the qualities of head and heart of the gentleman of that

name), yet it appears very clear that M.R.C.S. does not know the name of the candidate for the office of assistant-physician, whose name is really Goulden, not Golding. Dr. Goulden was a pupil of King's College, London, and was unsuccessful in his endeavours to obtain an appointment in their hospital. He is, it is true, "*Professor of Medical Classics*," but without a class. He entered the practice of St. Thomas's Hospital with Dr. Leeson; but did not come near that establishment for the last year or two, until he heard of a vacancy. Dr. Leeson was scarcely known to any of the governors at the period he entered to St. Thomas's, and he has, to my knowledge, obtained the good opinion of many of the governors and all the medical officers, solely on the score of talent and gentlemanly standing.

To M.R.C.S.'s question, "*Who is Dr. Leeson?*" I reply, A gentleman well known in the scientific world, and who, having been regularly educated at Cambridge and Oxford, obtained his degree at the latter university, by keeping the requisite exercises for the same, after having first obtained the degrees of M.B., A.M., and A.B.; having undergone no less than three university examinations, besides attending the regular courses of lectures in London, and presenting a certificate of three years' attendance on hospital practice, without which he would not have been admitted to examination for A.B.; an examination, it should be borne in mind, conducted in public by men eminent in science, Dr. Kidd, Dr. Daubeny, and Dr. Ogle, and at this time much more severe than it used to be, being no longer a mere matter of form.

One word more: Dr. Leeson was, and is, qualified to practice by *his licence*, notwithstanding the college; and there is no hospital law to prevent his election; but the sticklers for the College of Physicians were frightened at the idea of an innovation on their darling privileges.

Your love of truth and justice will readily induce you to give insertion to these facts, which, without insinuating anything to the disparagement of Dr. Goulden's talents, I defy his friends to disprove.

M. D.

Brighton, Nov. 3, 1840.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR:—Perhaps you will oblige me by inserting in the pages of your Journal the following statement and inquiry:—

Last Sunday morning, I was going round the wards of Guy's Hospital with Mr. B. Cooper: as is usual, on Sunday, there were very few students present; but all who were there had their hats off excepting me. As I did not feel myself shrinking into less than nothing by the side of Mr. Cooper, I kept my hat on. We had walked half through one of the wards, when Mr. C. turned to me, and sharply said,—"Sir, if you cannot show proper respect to your superiors, I desire that you will leave the room; and until you have made an apology to me for your vulgar and ungentlemanly conduct, I shall not allow you to visit patients with me again!" Under these circumstances, Mr. Editor, what shall I do? My spirit objects to offering any apology, yet if I refuse I shall be debarred from seeing Mr. Cooper's cases, and probably expelled, for a certain period, as was a gentleman a short time ago, who had *behaved badly at church*! I am, Sir, your obedient servant,

JAMES CLARK LARREN.

St. Thomas's-street, Nov. 4, 1840.

*** The custom observed in the hospital should be followed by *all* students. Much greater grievances exist in Guy's Hospital than such as that of being required to walk uncovered in the wards. Mr. Cooper will accept, as the best "apology," an observance of the usual custom on other occasions. Respecting the expulsion of students from the wards, it may be observed that the rights of the pupils in the hospital do not hang upon hat-pegs, or rest upon pew-cushions.

MR. KEY'S INTRODUCTORY LECTURE.

To the Editor of THE LANCET.

SIR:—I trust you will pardon me for making one or two remarks upon a subject which I conceive is of some importance to the readers of THE LANCET, more especially as the extent of circulation of your Journal probably exceeds that of any other periodical on medicine and surgery in the United Kingdom of Great Britain and Ireland. In your Number for Oct. 31, 1840, you have reported the introductory lecture of Mr. Aston Key, delivered on the 5th of the same month, at Guy's Hospital, preparatory to his lectures upon surgery in that school; the three last paragraphs of which are so much in keeping with my own ideas and habits pursued for a series of years, that I feel gratified to find such sentiments uttered by any one who is charged with the responsibility of instructing the rising generation in the medical profession; and I am convinced, that whoever will steadily adopt the useful directions so judiciously recommended in that lecture, will have good reason to rejoice that he has adopted the suggestion. Far be it from my wish, or ability, to attempt to guide your experience, or even throw out a hint with a view to render such

productions most useful, more especially to one engaged in the arduous duty of conducting such a periodical,—but we all well know that a lecturer may possibly sometimes wish to dress up his subject somewhat differently in print for the public eye, to the style in which he may find it necessary to address a class, without changing the ideas, the majority of which may possibly be tyros upon the subject they are listening to for information; be this as it may, will you allow me to suppose, that the lecture I have alluded to may possibly not have had the advantage of the learned lecturer's inspection, and if so, will you further allow me to say, without implying any deficiency in the reporter, that the object intended by such publications never can be impaired; but, on the contrary, their value greatly heightened by such a preparation, consequently more gratifying to the lecturer, and advantageous to the public. If I am not correct in my suspicions, I hope you will pardon this intrusion. I am, Sir, your obedient servant,

THOMAS JEFFREYS.

Liverpool, Nov. 10, 1840.

CAUTION TO MEDICAL PRACTITIONERS.

To the Editor of THE LANCET.

SIR:—Allow me to request the favour of insertion for the following communication in your widely-circulated Journal:—

On Thursday last (the 5th instant), during my absence from home, about 2, P.M., a well-dressed man, very stout made, with dark hair and whiskers, about five feet seven inches high, drove up to my door in a handsome private cabriolet, and inquired if I were at home; on being informed that I was out, he asked the servant if her mistress were in the way, and begged her to make his compliments and say his name was "Ayre," of Finsbury-square, that he was known to me, and having a patient in this neighbourhood who required cupping, would feel obliged if he might have the use of my cupping-case; and as I am acquainted with a highly-respectable member of our profession of the name he assumed, the instruments were furnished forthwith, under the promise of their being returned within an hour. I have only to add, that the "*hour* has not yet come." Hoping the above may be useful to the members of the profession in preventing a similar imposition being practised upon them, I remain, Sir, your obedient servant,

H. B. BURFORD.

20, Grove-place, Lisson-grove,
Nov. 9, 1840.

MR. BLOXAM AND DR. RAMSBOTHAM.

To the Editor of THE LANCET.

SIR:—May I request the insertion of a few words in reply to a letter of Dr. F. Ramsbotham, published in THE LANCET of Nov. 7th.

I regret that any expression of mine should have given offence; nothing could have been more foreign to my wishes. All I intended to convey or still wish to express is, my conviction of the incorrectness of an assumed fact contained in the work now publishing by Dr. Ramsbotham, and to point out the fatal deductions which may be drawn from it.

Having little time and less inclination for controversy, I beg to refer those of my professional brethren who take interest in these matters, to the "extract" of my lecture in THE LANCET of Oct. 24, and confidently leave the subject in their hands. I have the honour to be, Sir, your obedient servant,

WILLIAM BLOXAM.

26, George-street, Hanover-square,
Nov. 12, 1840.

A QUESTION FOR FARMER GUARDIANS.

To the Editor of THE LANCET.

SIR:—At a meeting held by the board of guardians of the Chippenham union, on Friday, Oct. 30, in accordance with the instructions of the poor-law commissioners, a proposal was made to the medical officers of the union to vaccinate all applicants at 1s. 6d. per case.

The medical gentlemen being unanimously of opinion that they could not, in justice to themselves and the profession, accept a less sum than 2s. 6d., declined the proposal, as well as one subsequently made of 2s.; upon which they were informed that the board would advertise for a vaccinator to the whole union.

In endeavouring to carry into effect the directions of the commissioners, the guardians were, I am convinced, merely performing what they conceived to be a public duty. Some among them are, however, disposed to consider that the medical men were much to blame in the course which they adopted on this occasion.

Now, as the majority of these gentlemen are farmers, would they like to be required to sell their wheat at somewhat more than *half the price* heretofore received for it, and, in addition, to comply with various troublesome regulations, lest the foreigner should be suddenly let in upon them, and the produce of their farms left to rot in their granaries?

The cases are parallel. Whether, in the event of the advertising plan being put into execution, any unhappy man will be found so lost to all sense of decency as to accept the office, remains to be proved. Should such an individual stand forth, how far he would enjoy the idea that "pulchrum est digito monstrari et diceri hic est," is not for me to show. I have the honour to be, Mr. Editor, your very obedient servant,

A Wiltshire Surgeon.

Nov. 2, 1840.

*** Our correspondent will please to let us know the name and terms of any adventurer who may show himself to the guardians on the occasion in question.

MEDICAL ATTENDANCE PREVIOUS TO INQUESTS.

To the Editor of The Lancet.

Sir:—As you have given much attention to the subject of coroner's inquests, I am induced to state the following occurrence, with the view of requesting the favour of an answer from you to an inquiry suggested thereby. I inclose my name and address as a guarantee for the correctness of my statement:—

I was lately called out of my bed at between five and six o'clock in the morning, to attend a case of suicide by hanging. The body had been cut down, after a short suspension, and I diligently employed the best means in my power to restore animation, but without effect. On the following day I heard that a coroner's inquest had been held on the body, to attend which I received no summons, nor any intimation of the time at which it was to be held.

The question above referred to is, Whether it is at the option of the beadle to summon, or not to summon, a medical witness in such a case as he may please? If so, he has the power, whenever he is inclined to do so, to mulct the medical man of his well-earned fee, and deprive the public of the benefit of his evidence. I am, Sir, your obedient servant,

A. B.,

A Legally-qualified Practitioner.

Oct. 19, 1840.

*** It is not usual in the western division of Middlesex to place "at the option of the beadles" the power of summoning medical witnesses to give evidence at inquests. A reference to the Medical Witnesses' Act will indicate to our correspondent what is, or ought to be, the practice with regard to the summoning of medical witnesses. However, in the present instance our correspondent does not appear to have been "a witness" of anything that it was necessary to prove at the inquest. He neither saw the man during life, nor found him after death. The parties calling the medical man to such a case are his debtors for his attendance. It is not right to convert the fee allowed by the Act for giving *necessary evidence* into a means of remunerating a medical practitioner for attendance to restore to life an apparently or a really dead body.

MEDICAL APPRENTICES.

To the Editor of The Lancet.

Sir:—It is the custom of many general practitioners who dispense to employ their pupils in the menial office of taking out the medicine, which, to youths who have always been well educated, is an offence to their feelings, and deprives them of that portion of their time which might be usefully employed in reading or visiting patients. Surely it is too bad for a medical man so far to deceive the friends of young men as, after taking upon themselves the office of teaching their pupils their profession, to employ them merely as *servants*, from the sordid motive of saving the few shillings it would cost to keep a lacquey for the purpose. The following is the situation in which I stand:—The gentleman with whom I am placed has a very extensive town practice. At his departure to visit the patients, I am employed in compounding medicines which may be required against his return. After having "put up the prescriptions," I have *to walk out with the medicine*, exposed not only to the insolence of servants, but also to the jeers of my more fortunate companions; so that, at my return, I am either too much fatigued to study, or have some fresh errand, which compels me to relinquish my book for the day. This ought not to be, but it is the case with

One of the Unfortunate.

Manchester, Oct. 27, 1840.

THE PUBLIC HEALTH.

To the Editor of The Lancet.

Sir:—In the proposed law for the medical profession, of one thing sight seems to be entirely lost, viz., the appointment of a minister of health, who should have charge of the general health of the country, enact regulations for hygeian police, appoint inspectors of hospitals and madhouses, superintend the establishments for quarantine, and, in times of epidemic disorders, issue such salutary ordinances and make public such advice as may be necessary. The council of discipline for physic might be appointed by him, out of a list to be submitted by the united professions, to hold office for three or five years; and to have

control over the *moral* as well as the professional conduct of members, with power to ungown, or erase from the list of the profession. Retailers of medicine might more properly be called "pharmaciens" than apothecaries (which latter name should be entirely dropt), and should not be allowed to advise or practise physic, as well as sell the drugs in their shops. Your humble servant,

R. P.

October 10, 1840.

PHYSIOLOGY OF MENSTRUATION.

To the Editor of THE LANCET.

SIR:—In your Journal of the 17th instant, "FINSBURIENSIS" seems to think that somebody or other has discovered the theory of menstruation, as follows:—"That menstruation depended on, or was connected with certain changes in the ovaria;" and that in the process of every menstruation, that an ovum was given off, which came to nothing, because it did not receive the fecundatory influence of male communication.

I do believe in the latter position, from an opportunity which I had, some time ago, of examining the ovaria of a fine girl, about eighteen years of age, who died, after seventeen hours' illness, from an ulcerated opening in the stomach, through which the food which she had taken at breakfast passed into the peritoneal cavity, and so caused her decease.

Upon examining the ovaria, I found that two ova had escaped; and had she been married, or otherwise, had each ovum received the vivifying influence from male deposition, they would probably have developed to parturition a being likened to one or both of the authors of its production. The theory of "disappointed pregnancy," or the circumstance of an ovum passing off as useless at every menstruation being correct, is beyond my comprehension. For, suppose an ovum were to escape at every menstruation—that twelve of them took place in a year, and went on regularly from seventeen to forty-five years of age, we should be able to count three hundred and thirty-six menstruations occurring in the course of that period, and for each one an ovum—a number utterly inconsistent with what was ever discovered by anatomists in the ovaries of the human female. The most prolific women rarely produce in a whole lifetime of copulative exertion, more than one or two-and-twenty children; which agrees with the number of vesicles found in the ovaries. How, then, can it be supposed that such a theory can be correct?

There can be no doubt that chaste unmarried females lose *periodically*, or during their *states of aptitude*, an ovum, but not oftener than one in the space of twelve or eighteen months, or perhaps in two years, but which passes off as nothing, in consequence of their celibacy. If I dared to trespass upon your space, I might say much more upon the subject. In hope that the physiology of menstruation will be cleared up some day or other; I remain your obedient servant,

J. L.

Finsbury-square, Oct. 20, 1840.

BOOKS RECEIVED.

The History of the Early and Present State of the Venereal Disease Examined; wherein is shown, that Mercury never was necessary for its Cure, as well as the injurious Consequences that result from its Employment; at the same time, pointing out approved Modes of Treatment, founded on its Pathology. By J. Hume Weatherhead, M.D. London: Highley, 1841.

A Practical Treatise on the Cure of Strabismus, or Squint, by Operation and by Milder Treatment; with some new Views of the Anatomy and Physiology of the Muscles of the Human Eye. By P. Bennett Lucas. London: Highley, 1840.

The Pathology and Diagnosis of Diseases of the Chest, comprising a rational Exposition of their Physical Signs; with an Appendix, containing various Opinions and Experiments on the Motions and Sounds of the Heart and the Bronchi. By Charles J. B. Williams, M.D., F.R.S. Fourth Edition, much enlarged, and illustrated by Plates and Tables. London: Churchill, 1840.

Elements of Chemistry; including the recent Discoveries and Doctrines of the Science. By the late Edward Turner, M.D. Sixth Edition, enlarged and revised by Justus Liebig, M.D., Ph. D., Professor of Chemistry in the University of Giessen; Wilton G. Turner, Ph. D.; and William Gregory, M.D., King's College, Aberdeen. Part III. London: Taylor and Walton, 1841.

On the Nature and Treatment of Stomach and Urinary Diseases; being an Enquiry into the Connection of Diabetes, Calculus, and other Affections of the Kidney and Bladder, with Indigestion. By William Prout, M.D., F.R.S., Fellow of the Royal College of Physicians. The Third Edition, much enlarged. London: Churchill.

TO CORRESPONDENTS.

Dr. Cooksen's communication shall appear in our next.

Mr. Clay's communications have been received.

Germanicus.—Such an "outline" would be useful and acceptable.

Answers to several correspondents are unavoidably postponed until next week.